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THE DEVELOPMENT  
of  
GRAIN INSPECTION IN CANADA

Wesley Smith, B.Sc. (Agr.)

A Thesis

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partial fulfilment of the requirements for  
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Department of Political Economy

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## Chapter 1.

### INTRODUCTION.

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The Canadian grain inspection system is a product of Canada's growth and development. It is a product in the sense that it germinated and grew in a medium of favorable economic and political conditions. Its life is characterized by change in structure brought about through the influence of changing environmental factors. Its present form and status is the cumulative result of its development.

Grain inspection is a specialized form of trade regulation which facilitates the transfer of the consumers' discrimination to the individual producer. In Canada we have a tendency to regard grain inspection simply as a means of protecting the producer and to overlook its importance as a method of taking greater advantage of the consumers' preference. This attitude is enhanced by the great distance separating the producer and consumer of Canadian grain, and by our close association with one phase obscuring the operation of the system as a whole. Emphasis on the protective feature of grain inspection probably arose as a result of changes in the system in response to the demand of farmers for relief from practices alleged to have discriminated against them. Protection has



been bought, not from consumers, but from other producers, i.e., producers of time, form and place utilities. The protective features of the grain inspection system are based on social ethics and not on favoritism, and are designed to transmit, so far as it is economically possible, the preferences of the consumers, indicated by prices, to the initial grain producer.

In the development of grain inspection the importance of both producer and consumer is more fully realized by considering a simplified situation. Our modern economic life is based on specialization and trade. Each member of society produces some good or service to be exchanged for other goods and services. Goods and services are produced for exchange and trade is inevitable. The actions of individuals in society are closely interrelated. The producer, whose incentive is profit, has the choice of producing any one of a large number of commodities or a number of kinds or qualities of one particular commodity. He will produce that which yields him the greatest profit, since it will enable him to attain the greatest satisfaction of his wants. His profits will depend on cost of production and selling price. The consumer's preference for a commodity is based on its utility to him, but the satisfaction of his preference is confined to that which is produced. It exercises his preference for a particular





commodity or a particular quality of a commodity, the consumers' discrimination between different commodities or qualities is registered in the price of that article. Price carries that discrimination back to the producer. The effect of price relative to producers' costs is shown in the amount produced. Supply in turn affects price. Hence, the producer and consumer are inseparably bound together, and in promoting closer trade relations commodity inspection is an important link.

The trade relations of individuals are influenced by certain characteristics of human nature which tend to introduce trade regulation. Each member of society is motivated by his own self-interest. His right to look out for himself is not questioned, but, in the pursuit of self-interest, people vary in their adherence to moral standards. Basically man is an animal possessing animal characteristics and tendencies which influence his behaviour. At a very early date man's self-interest induced him to become a social animal, since by associating with others of his species he secured certain benefits from society which he could not obtain individually. At the same time, he found it necessary to restrict his personal liberty to promote the success of society. These restrictions became our social laws. One of our earliest codes of social behaviour is the Ten Commandments which contains the social law "Thou shalt not steal". Certain



organizations have been formed for the purpose of teaching the observance of social laws, and although they have improved the moral standard of our civilization they have not eliminated those animal characteristics and tendencies against which social laws are necessary. The satisfaction of the animal law of self-interest meets opposition from the social law of property, and when the former is the stronger theft is the result. In our civilization many forms of theft have been developed against which social regulation is necessary. The practice of fraud, one form of theft, has been responsible for much of our trade regulation.

In direct trade relations between consumer and producer self-interest will promote a personal examination or inspection of the article exchanged. Inspection may be undertaken by the consumer to guard against loss from misrepresentation or to satisfy his preference for certain qualities. If the consumer has the choice of a number of products or qualities of one product, he will discriminate against that which does not satisfy his preference. His demand for the less desirable product will be weak and he will be induced to accept it only at a lower price. In direct trade the consumers' discrimination is transferred directly to the producer. Knowing that the consumer will inspect a purchase, the producer may also inspect and



qualify his products to meet the preference of the consumer and to avoid the latter's unfavorable discrimination. He may simply examine his product for certain defects. If the product is found defective, it may not be offered for sale to the consumer. This type of inspection is practiced by manufacturers of automobiles and other articles. In addition to simple inspection, the producer may also sort his product into classes or grades to facilitate its acceptance by the consumer. Due to the vagaries of nature, agricultural products cannot be produced to conform to a certain standard of quality, although a product, portions of which may vary in quality, may be sorted into grades that have become standardized. Depending on the use of a product, different consumers will have different preferences for, or will readily accept, different qualities or grades of a product. In direct trade, a producer will set his grades according to the preferences of the consumers with whom he trades, and a close relationship is evident between a producer's grading system and the consumers' preference.

In indirect trade relations the exchange of goods between producers and consumers is indirect through a group of middlemen, and, in the absence of grading, the scale of the consumers' discrimination, as indicated by price, may not be transferred in its full extent to the initial producer. Individual shipments of grain, for





example, are so small that it is not economical to retain their identity from producer to consumer. When a number of small shipments are bulked together their identity is lost, and an opportunity is created for an unfair practice since there may be nothing to prevent the inclusion of some lots of inferior quality or value. It may be to the self-interest of a grower to produce grain of an inferior quality. His contribution will then lower the average quality and price of the bulked shipment, but the reduction in the price he receives may be more than offset by his extra profits from producing inferior quality. When the quality of a shipment is lowered, the consumer will discriminate against it and the whole group of producers will suffer whose separate lots made up that shipment. In addition, the community or nation will suffer whose shipments are lowered in quality and price since the buying power of both the producer and the nation will be decreased. The self-interest of certain producers may cause injury to their fellow-countrymen, and in consequence, the social laws of commodity inspection and grading have been instituted.

Since social laws, including trade regulation, commodity and grain inspection, have been enacted to restrict the malicious self-interest of certain individuals, it is true that grain inspection in Canada does protect





the producer. Since all beneficial legislation protects, not one but all classes of society, the inclusion of the term protection in a definition of grain inspection appears unnecessary. In the Canadian grain inspection protection is secured by the adoption of practices and methods seeking to establish that close contact between producer and consumer existing in direct trade but lost in the development of ~~indirect~~ trade. Grain inspection in Canada is a specialized form of trade regulation that facilitates the transfer of the consumers' discrimination to the individual producer.

It is extremely difficult to trace the origin of commodity inspection. Such work would necessitate the examination of both ancient and modern literature of numerous foreign countries, and the value of such an undertaking is questionable. It is indeed beyond the scope of the present study. Commodity inspection, like many other institutions and practices, may have been introduced into North America, but, evidence points to its origin in the United States. The manner in which commodities were shipped, the kind of container and transportation difficulties together produced a situation peculiar to North America, which resulted in commodity inspection. The early inspection acts of the United States were so simple and for many years operated so



unsatisfactorily that one would assume that they were the creation of legislators unguided by foreign experience or example. It is probable that commodity inspection is of comparatively recent origin since the articles inspected, being bulky, did not extensively enter commerce of ancient times.

Commodity inspection was introduced into Canada in 1785 but it was not until 1863 that this service was employed in the marketing of grain. The first "grain" act was modelled after inspection acts for other commodities because the grading and inspection systems regulated by them had been proven by experience to work satisfactorily under the existing economic conditions. These acts had been revised and improved frequently before their use as a basis for drawing up our first "grain" act. To fully understand the grain inspection system inaugurated in 1863, it is necessary to trace the development of these earlier commodity inspection systems. In addition to the inspection acts, there are several groups of acts which should be consulted in a study of the development of grain inspection. These acts are important because they or parts of them have been incorporated in the grain acts or because they authorized the formation of organizations which have or have had an influence on grain inspection.



The Canadian grain inspection system includes the organization in charge of, the principles underlying the operation of, and the method of grain inspection. The term "grain inspection" has been taken here to mean the regulation of all those phases of marketing dealt with in the Canada Grain Act. One activity regulated by this act is grading which may be defined as sorting a commodity into classes differing in quality, and a grading system is one organized for the purpose of performing that function. In order to grade a commodity it is necessary to examine or inspect it. Grading involves inspection but the inspection of a commodity does not necessarily mean that it is graded. Early activities of commodity inspection were confined to grading, and the practice grew up of using the two terms interchangeably. This practice has persisted, to some extent at least, to the present day, but the term inspection is reserved here for a much wider field of activity than that involved in grading. It will be shown that commodity grading, or inspection as it was formerly called, was first established to prohibit adulteration, a form of fraud. As fraud and discriminating practices became apparent in other branches of grain marketing, the scope of inspection acts, which had dealt only with grading, was enlarged to provide a means of correcting these abuses. These later regulations





and those concerning grading are similar in that they both attempt to correct abuses by facilitating the transfer of the consumers' discrimination to the individual producer. If we accept this broad meaning of the term it is apparent that grain inspection occupies a very important place in the marketing of Canadian grain.

The grain inspection system is important because of its control over the marketing of grain. The Canada Grain Act gives to the Board of Grain Commissioners, who administer the act, certain specific duties and power "to make regulations or orders... governing any other matter relating to the handling of grain". This wide power gives the Board of Grain Commissioners virtual control over the practice of handling grain. They act as a governor on the grain trade to see that all, especially the producer, receive <sup>fair</sup> play and justice <sup>under the competitive system.</sup> The importance of the grain inspection system is more fully realized when we consider the place of eminence occupied by the grain trade in the economic life of Canada. Wheat, the most important product handled by the grain trade, has for many years been Canada's leading export commodity. In recent years Canada has become the world's leading exporter of wheat. These two facts indicate the importance of the grain trade in the economic life of Canada. The bulk of the population of Canada is dependant on





agriculture, and grain is agriculture's most important product. The price grain commands on the world's market governs to a large extent the size of the farm income. This in turn is reflected in all those lines of activity concerned with the marketing of the crop, and in all those industries dependant on the agricultural population for a market. Grain is the most important commodity of western Canada and the crop return is an index of the prosperity of that region. The grain inspection system is concerned only with the handling of grain. It does not control price, but, by controlling certain handling charges, it has some influence on the proportion of the world price received by the farmer. The importance of the grain inspection system as an institution in the economic life of Canada is that it exercises a large measure of control over the marketing of that group of products which have such a potent influence on the prosperity of the country.

The Canadian system of handling grain is reputed to be the most efficient in the world. It is not the intention here to prove or attempt to prove that this efficiency, or that the importance of the grain trade, or that the high quality of Canadian wheat is the result of the work of the grain inspection system. The stand taken is that grain inspection arose as a result of the presence of certain predisposing factors, and that it



continued in use as one of the means of overcoming a natural handicap - a long expensive rail haul. Such a handicap favored the adoption of bulk handling of grain, the establishment of grades and the sale of grain by certificate. The function of the grain inspection system, in addition to protecting the grain producers and merchants of this country, is to control the marketing of grain in such a manner as to inspire in the foreign buyer that confidence essential for the continuance of a marketing system which makes possible the profitable production of wheat in western Canada. This is accomplished by recognizing the consumer's preference in establishing grades and in maintaining their uniformity.

The grain inspection system is of a dynamic nature. In the course of its development certain principles have been evolved. Although it has reached a high state of perfection it is not perfect nor can it remain static. Changing conditions call for adjustment in the system, and if it is to function in the manner intended it must adhere to certain well defined principles. At the present time changes are advocated which are of a fundamental nature. Recently separate grades have been provided for Gamet wheat. Some of the changes suggested are an increase in the number of classifications for moisture content, and that grading be based on protein content. The outcome of the present world wheat situation will have an influence on production



and grain inspection in Canada since production is one of the primary factors influencing inspection. The restriction of production which has been freely advocated in recent years may properly be considered the work of the grain inspection system because it is an attempt to adjust the actions of the individual producer to the consumers' preference and discrimination.

The grain inspection system, like other institutions, cannot remain static. It must change with changing economic conditions. Unless changes are made in the proper direction, those advantages we now enjoy from the operation of the present system will diminish. To assist us in making these decisions, a study of the development of grain inspection will reveal those principles which have been followed in bringing our system up to its present state of efficiency and which must be followed if it is to continue to function in facilitating the transfer of the consumers' discrimination to the individual producer.





## Chapter 2.

### THE ORIGIN OF STATE CONTROLLED COMMODITY INSPECTION.

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The Canadian grain inspection system is a comparatively recent development of commodity inspection. The latter emerged in the United States as a specialized form of trade regulation designed to remove the cause of the foreign consumers' unfavorable discrimination. Foreign trade was a very important factor in the early development of North America. European commercial organizations opened up the country in their search for furs. Later, agriculture was encouraged to increase trade. As the settlement grew a considerable volume and variety of commodities became available for export. Some products were perishable which necessitated their being packed in barrels or casks to avoid damage during transport. The shipment of commodities in sealed containers of unknown origin creates an opportunity for fraudulent packing which is difficult to trace. In most communities some individuals take advantage of every opportunity, honest or otherwise, to secure personal gain, and commodities, particularly flour, were adulterated during the early years of the North American settlement. The foreign buyer on whom the first fraud loss fell protected himself by offering less for the commodity from those areas known to practice fraud.





The loss was thus transferred to the community perpetrating the fraud, but part of it was borne by persons not responsible for the fraud. For the welfare of the New York colony in which fraudulent packing of flour was common some form of regulation was necessary to prevent injury to the community from practices of a comparatively few dishonest persons. The regulation adopted prevented the exportation of the adulterated commodity, but to detect adulteration inspection was necessary.

The emergence of commodity inspection under state control on this continent was accomplished in four stages:-

- 1, Private inspection by the fur traders, ---- 1653;
- 2, Inspection by municipal organizations, 1653-1694; 3, A lapse of commodity inspection, 1694-1741; and 4, State controlled commodity inspection, 1741-----.(1)

Private inspection is that practiced by individuals and by commercial organizations, since the latter act as and for the individual. The inspection may be either the producer or consumer type. Private inspection is usually confined to an individual's or to a firm's own goods or prospective purchases, but it may be undertaken by a private individual or firm as a service for others. The

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(1) The dates of the periods apply only to the colony of New York where commodity inspection first came under state control.



Hudsons' Bay Company of London, England, now operate a fur grading system and grades a large part of the furs entering the world's fur trade. Commodity inspection conducted by the Board of Trade in certain cities of the United States is regarded as being state controlled since the early Boards of Trade were incorporated by the government for the purpose of providing inspection services.

Commodity inspection conducted by or under the direction of the trading companies engaged in the early fur trade of North America may be regarded as being of a private nature. Their charters granted them exclusive trading privileges and public administrative authority within the boundaries of their domain. Although they performed the functions of a government, their policies were influenced by the shareholders demand for dividends. Some companies discouraged all enterprise except that associated with the production of fur. In areas where such a policy was pursued any inspection that may have been practiced was private in nature since the company had a monopoly of trade. Other companies encouraged agricultural settlement to develop trade for their organization, and any inspection that may have been practiced by the company or under its direction may be considered private so long as the company retained its jurisdiction over the country.



About 1653, the Dutch West India Company inaugurated an extensive colonization program in what is now the state of New York. Population increased rapidly especially in the rural areas. The character of the country settled influenced the trend of agricultural development. The heavy forest covering this area prevented a rapid expansion of cultivated land. Poor transportation facilities restricted the exchange of commodities. These two factors imposed the adoption of a more or less self-sufficient form of mixed farming. The crops and livestock produced were chiefly those introduced from Europe since the diet of the early American settlers tended to encourage the cultivation of those food crops to which they had been accustomed. Wheat was their chief bread grain and it soon became one of their most important crops. Small quantities of wheat were soon available to exchange for those commodities which could not be produced on the farm. This wheat found its way to the seaboard towns where it was manufactured into flour and exported.

Disputes soon arose between the settlers and the Company. The settlers objected to the administration of the governor, and after many disputes, protests and delegations, finally succeeded in securing a modified form of municipal self-government. In 1653 New Amsterdam,





later named New York, was incorporated by the Company as a city, but the Company through its charter retained the right to veto the actions of the council and also to remove them from office.

As a result of the increased agricultural production, certain industries sprang up of which the most important was flour milling. The manufacture of flour was permitted by private individuals but the Company, primarily interested in the trade of the colony, desired some control over the industry. To centralize the industry for the purpose of control and taxation , the Company granted the city of New Amsterdam a bolting monopoly which gave the citizens of that city the exclusive right to mill all flour in the colony.

No reference has been found to substantiate the existence of a flour inspection system during the closing years of the Dutch Company's reign, however it is probable that one did exist. With their control over the industry and trade of the colony the Company were in a position to make regulations against practices injurious to the trade. If the need had arisen the Company undoubtedly would have instituted some sort of regulation in the flour milling industry tending to maintain the goodwill of their foreign customers. If such regulation took the form of inspection it would be classed as privately controlled due to the





authority vested in the Company.

Commodity inspection in New York, if such did exist, passed from private to municipal control when the Dutch colony was taken over by the English in 1664. The following year the bolting monopoly was confirmed by the English governor (1). In 1674, "the Mayor and Aldermen of New York advised the Governor of the colony 'That it was absolutely necessary for the good and reputacon of the country, That floure be viewed by a sworn Officer, and none suffered to be shipped abroad but such as shall be fine bolted...' and marked with the town brand" (2). The date of establishing flour inspection has not been ascertained, however, flour exports were subject to inspection previous to the close of the period of municipal control in 1694. It is apparent from the above quotation that flour inspection was instituted to improve foreign trade.

An expansion of the settled area following a policy encouraging immigration produced a situation which resulted in the lapse of commodity inspection. When the production of wheat was confined to an area close to New York city, the bolting monopoly created no great economic hardship, but when, following the expansion of agricultural settlement, wheat supplies were drawn from distant areas

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L. (1) Chas. Byron Kuhlmann, The Development of the Flour Milling Industry in the United States. pp 10-11; quotes New York Journal of the Legislative Council, lll part 2, p 3  
 (2) Kuhlmann, p 11; quotes N.Y.Colonial Documents, lll 337.



the bolting monopoly discriminated against the distant producer. Transportation was crude and expensive and the necessity of minimizing shipping charges tended "to compress the bulk and concentrate the value of the article" (1). High transportation charges favored the location of flour mills near the source of wheat supplies, but this was opposed by the bolting monopoly. "As time passed, the bolting monopoly met considerable opposition particularly from the Albany merchants who wished to ship their flour directly to New England towns. In 1684 they appealed to the Governor and Council for a repeal of the bolting monopoly, but were unsuccessful" (2). "The planters throughout the province are said to have set up bolting machines in defiance of it, and in 1694 induced the legislature to repeal it" (3).

The repeal of the bolting monopoly removed an obstacle to the efficient marketing of wheat but it also discontinued a practice tending to maintain or improve the quality and price of flour. Governor Cornbury in his report to the English Board of Trade thought the repeal of the bolting monopoly was a blow to the trade of the colony. "Till that time nobody was permitted to bolt but the citizens of

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~~NEW YORK~~ (1) Hugh Gray, Letters from Canada. p 201.

(2) Kuhlmann, p 11; quoted N.Y.Jr of the Legislative Council V 62.

(3) Kuhlmann, p 11; Quotes N.Y.Colonial Documents, IV 461.



New York; then Bolters were under rule, proper Officers being appointed to view all the flower that was exported, so that no bad commodity was suffered to go out. But in that year (1694) an Act of Assembly was passed whereby all persons in the Country as well as the City were permitted to Bolt; By which means two great inconveniences hapned, one (which is the greatest) is, that the commodity is vitiated, for the Country Bolter being under no rule of Check, does not care what the commodity is, so it passes out of his hands; so that he very often mingles Indian Corn Flower with his wheat flower; this being discovered in the West Indies has so cried down our flower that the Pennsylvania flower sels for three shillings the hundred more than ours; Whereas the New York flower used formerly to exceed Pennsylvania flower one and sometimes two shillings the hundred..." (1)

In the absence of inspection flour packed in barrels presumably passed unopened from the millers to the final consumer. The practice of packing commodities in barrels arose out of the methods of transportation existing at that time. Hugh Gray points out the importance of compressing bulk and concentrating value, and in addition says, "when flour is well packed, it is not so

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(1) Kuhlmann, p 12; quotes N.Y.Colonial Documents V 57.





subject to receive damage as wheat would be; It resists water better" (1). It was difficult to trace adulteration to individual millers when the flour was packed in barrels and was not inspected. The consumer, in self-protection, naturally sought those sources of supply shipping unadulterated flour. In offering a lower price for New York flour, the consumer discriminated against the producers residing in the market area tributary to New York. Receiving less for their flour, the New York millers were forced to pay less for their wheat supplies. The discrimination against New York flour was passed back to the initial wheat producer. The gains of the dishonest miller involved losses to other millers and farmers.

The removal of the discrimination against New York flour was supported by the New York merchants. Lower prices for New York flour meant a lower farmer purchasing power and a restricted buying power on foreign markets. The removal of the cause for complaint against New York flour, it was argued, would raise its price and bring more business to the city. While this would benefit the New York merchants, it would also benefit the initial wheat producers. The miller, receiving higher prices for his flour, in a competitive situation, would pay the

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(1) Hugh Gray, p 201.





farmer more for his wheat. Adverse discrimination of the consumer was passed back to the initial producer. Could not favorable discrimination follow the same course?

The New York merchants attempted but failed in 1698 to have the bolting monopoly restored. They attempted to enforce inspection on country bolted flour by imposing a tax on country bolted flour passing through New York for export, but met opposition from the legislature. They were successful, however, in having a state system of inspection adopted in 1741. From 1750 on "the Inspection system seems to have been fairly successful. At first it seems to have been confined to preventing adulteration and short weight" (1).

The adoption of inspection did not remove the discrimination against New York flour. In addition to adulteration and short weight, quality was a factor entering into the determining of the consumers' preference. The attempt to overcome the discrimination against New York flour resulting from the consumers' preference for quality led to the adoption of grading in the inspection system.

In 1768 the New York Chamber of Commerce advocated grading to improve quality as a means of meeting

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(1) Kuhlmann, p 13.



competition from other colonies. It was proposed that,- (1)

"1. The flour should be graded as to quality, as well as to its merchantability. The Inspectors should consider not only the color and texture of the flour, but should carefully examine (either by mixing up a little of the flour into a cake and baking it, or by some other effectual experiment) whether it has not been injured by being ground too close, or in some other way so as to prevent its rising and making light, white bread.

2. That barrels should be marked with the name and address of both inspector and manufacturer.

3. That inspection should be improved by centralizing responsibility in one inspector."

Where several independent inspectors were competing for fees they were afraid to grade each lot of flour strictly on its merits (2). Grading was incorporated into the flour inspection system of New York in 1768 or 1769, of Virginia in 1772 (3), and of Pennsylvania in 1784 (4).

In the adoption of grading we see again an attempt to avoid the consumers' discrimination against a particular group of producers, but we also see an attempt to facilitate the transfer of the consumers' discrimination, whether favorable or otherwise, toward the individual producer.

The consumer does discriminate in his purchases. When he

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(1) Kuhlmann, p 13; quotes Stevens, Chamber of Commerce Proceedings, 30.

(2) Kuhlmann, p 14; Quotes Stevens, Chamber of Commerce Proceedings, 30.

(3) Kuhlmann, p 21.

(4) Kuhlmann, p 32.



deals with individual producers, his discrimination is transferred directly to the producer. When he deals with a group of producers acting as one unit, his discrimination falls on the whole of the group. When unfavorable discrimination fell on a group of producers as it did in New York, the group attempted, through inspection and grading, to remove the discrimination against it by improving their product. The attempt was only partially successful. The climate of New York was more unfavorable for the production of high quality wheat and flour than it was in certain other wheat producing colonies.

A system of marketing which places all qualities of the product in one class is not conducive to the improvement of the general quality of the product. There is no inducement for the individual producer to improve the quality of his product above the average because the slight increase in price resulting from an improvement of the average by the addition of his superior quality will not compensate him for his extra trouble and expense in producing high quality. There is every inducement for the individual producer to lower the quality of his product because, he will profit by the difference between the cost of producing his low quality product and the cost of producing an average quality product. In attempting to remove the discrimination against their flour, the New York







merchants realized the importance of improving its quality. They must also have realized the difficulty of increasing the average quality without additional compensation for the production of that portion of the commodity which would raise the average.

To lessen or remove the discrimination against a group of producers, it is necessary to install some system, such as grading, which encourages the production of high quality. The consumer does not discriminate against the producer as a person but against the producer's product. In simple trade relations the discrimination is carried by the product to the individual producer. If the producers bulk their product into one lot, the discrimination is against the product of the group and is carried by the product to the group, and each producer is treated alike. As long as the product of a group is bulked together, there will be a tendency to lower quality and increase the discrimination against it. The group cannot remove or lessen the discrimination against it unless it favors the individual producer who raises the average quality of the group's product.

It is possible to discriminate between high and low quality of a product by differences in price, then bulk the high and low qualities together, and raise the average



quality of the bulked product, provided the spread in price or range of discrimination is sufficient to discourage the production of low quality and encourage the production of high quality. This practice may be followed where the commodity flows in a steady stream between producer and consumer as in the case of oil from different wells bulked together in a common pipe line. Grain does not flow in a steady stream between producer and consumer. It flows in intermittent lots or shipments. Shipments may be of different quality or all shipments may be of one quality but made up of smaller lots possessing varied qualities. If high quality production is encouraged by the payment of premiums, the average quality of the grain should improve under both the above systems of shipment. However, since certain defects or inferior qualities cannot be readily removed from grain, more will be gained by retaining the identity of the grain exhibiting marked variations in quality. The separation of a commodity into lots having different qualities is commonly called grading. By sorting a commodity into grades according to the consumers' preference, the transfer of the consumers' discrimination toward the individual producer is facilitated. The premium paid by the consumer for the grade or quality he prefers is carried by the



grade back to the producer whose product is classified into that grade or quality. Likewise, the discount of the consumer for low quality is transferred back to the producer of low quality or grade.



## Chapter 2.

### THE INTRODUCTION OF COMMODITY INSPECTION INTO CANADA

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Commodity inspection was introduced into Canada to promote the development of foreign trade. The early commodity inspection systems of Canada (1) were reproductions of those originating in certain of the American States. Once established the Canadian systems developed in a manner characteristic of their Canadian environment, but for many years were not free from the influence of the United States.

Canada (1), like New York and certain other states, suffered from the unfavorable discrimination of the foreign consumer caused by her exportation of low quality and adulterated products. The consumer naturally wishes to secure the greatest value for his money. Variations in the value of an agricultural commodity are largely based on quality. If separate lots of a commodity varying in quality are offered for sale at a uniform price, the consumer will select that which has the higher quality. This action on the part of the consumer will result in a price spread between the higher and lower quality portions

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(1). Upper and Lower Canada.





of the product. The spread in price between the different qualities of a commodity will become fixed at a point where equal value and satisfaction are secured with a given expenditure of money. The discrimination of the consumer against a low quality product is transferred through price to the producer or the producing country. We have seen (1) that New York Flour was discriminated against in the foreign market and that she attempted to increase the price of her flour by improving its quality through the adoption of an inspection system. An improvement of the quality of an export commodity would tend to lessen or remove the discrimination against it in a foreign competitive market and consequently improve its price. Little direct evidence has been secured proving that Canadian exports were discriminated against on the foreign market, but indirect evidence indicates that such a situation existed. The title or preamble of our early inspection acts clearly explain the purpose for which they were enacted. The first inspection act of the Province of Quebec (2) was entitled, "An Ordinance to prevent the exportation of unmerchantable flour and the false taring of bread and

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(1). Page 21.

(2). Statutes, Province of Quebec, 1765, c 3.



flour casks". In the preamble of another early act (1) the purpose of the act is more clearly stated,- "Whereas Pot and Pearl-ashes are articles of increasing consequence in the exports from this Province, and it would tend to the improvement of the quality thereof, and have other beneficial effects that the same should be ascertained previous to their being shipped for exportation;". The practice of inspection with a consequent improvement of quality by Canada's competitors would presumably place Canadian products at a disadvantage in the foreign markets. To regain her position on the foreign market Canada was forced to improve the quality of her exports. To achieve this result she adopted the practice of her competitors, commodity inspection.

Although commodity inspection intimately concerns the producer of the article inspected, it is not without importance to the nation. In the early days of inspection it was the nation rather than a particular group of its citizens that sought the benefits of inspection. New countries such as Canada and the United States were desirous of securing a large importation of capital goods to further their development. These were secured by encouraging the immigration of settlers and capital, by

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(1). Statutes, Lower Canada, 1795, c 2.



placing loans in foreign lands, and by developing foreign trade. Since a greater value of exports resulted in a greater volume of imports for domestic consumption and development, the governments adopted policies tending to increase the production and quality of commodities for export. Commodity inspection became a measure of national economy to further the development of the country.

Commodity inspection in both Canada and the United States is closely linked up with early settlement. In many respects the early development of both countries is similar. Both rapidly increased their population and their demand for foreign goods. The early settled areas were heavily forested and favored the adoption of similar forms of mixed farming. Poor transportation facilities impelled an inland location of processing industries, and the use of barrels for shipping commodities. Both countries suffered from the unfavorable discrimination of the foreign consumer, and both adopted commodity inspection to remove the cause for complaint.

In other respects, however, the early Canadian settlement differed from that of the United States. The colonies of the United States, distributed along the Atlantic coast, had approximately equal access to the sea and more or less similar climates which encouraged





but slight variations in their development. The Canadian colonies possessed widely divergent climatic and geographic features which promoted a varied development of commodity inspection in the several colonies. The trend of agriculture in Nova Scotia, which necessitated the importation of certain staple food crops, produced a set of conditions leading to the adoption of an inspection system for the protection of the consumer. Commodity inspection in Lower Canada, now Quebec, developed similar to that of New York. The inland location of Upper Canada, now Ontario, retarded the development of commodity inspection. These differences make it necessary to study separately the development of commodity inspection in each area.

The chief influence of the differences in the settlement of the Canadian colonies on commodity inspection was in the development of two types of inspection. The type of inspection practiced in any particular country depends on whether that country is a surplus producer or consumer of that commodity. Countries on an import basis may practice inspection to protect their consumers. Countries on an export basis may initiate inspection for the benefit of the producers or the country at large. Inspection therefore is directly related to production. So long as the Canadian colonies maintained an identity



independent of each other, the two types of inspection for one commodity continued to exist. When the colonies were federated into a Dominion with the sole authority to regulate trade resting with the latter, the Dominion's status as a surplus producer or consumer determined the type of inspection to be retained.

#### CONSUMERS' INSPECTION IN NOVA SCOTIA.

Commodity inspection in Nova Scotia was first adopted to protect the consumer. Nova Scotia early became an importer of wheat and flour because natural impediments to grain production forced farmers to grow other crops. Trade regulation designed to protect her as a consumer and importer of grain and grain products took the form of consumers' commodity inspection.

Although the wheat acreage of Nova Scotia expanded with the increase in population, the total production never became great. The losses occasioned by the ravages of rust and insect pests forced farmers to turn to some other crop with the result that the Maritime provinces have long been importers of wheat and wheat flour. It is doubtful whether statistics are available to show exactly when the Maritimes became dependant on foreign supplies of wheat. A census taken in 1827 shows Nova Scotia had a population of 123,630 and a wheat production of 152,861



bushels (1). The per capita consumption of home grown wheat was less than 1.3 bushels per year. This is probably less than the normal requirements (2) and the deficiency was made up by imports. Haliburton (3) showed that Nova Scotia's flour imports exceeded her exports during the first quarter of the 19th century. Nova Scotia has long lost her importance as a wheat producer.

Nova Scotia's position as an importer of grain had a direct influence on the legislation she enacted for the regulation of the grain trade. Her wheat supplies were drawn from the United States and the Canadas but trade restrictions, reciprocal trade relations, wars and patriotic motives confined the bulk of her grain trade at various times to either one of the above countries. The manner of measuring grain in the export countries (4) was such that shipments were often short when they arrived at their destination. Evidently part of this loss fell upon the importer and Nova Scotia early enacted legislation which shifted this loss to the exporting country. In 1792 Nova Scotia passed "An Act

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- (1). Census of Canada, 1870-71, vol 4, p 94.
  - (2). The per capita consumption of wheat in Canada from 1922 to 1931 was 4.4 bushels. Canada Yearbook, 1933, p24
  - (3). Thos. C. Haliburton, Historical and Statistical Account of Nova Scotia. Joseph Howe, Halifax, 1829, v 2, p 388. See table #1 appendix.
  - (4). The manner of measuring grain is described on page 61





to revive and amend an Act establishing the standard weight of grain and appointing proper officers for measuring Grain, Salt, and Coals, etc." (1). The act referred to as being amended was a temporary<sup>act</sup> act passed some time previously and suffered to expire (2). This act continued in force, with many amendments, until the Dominion assumed control of commodity inspection in 1873.

The inspection acts of Nova Scotia, insofar as grain was concerned, established a consumers' inspection system. The section dealing with grain in the Inspection Act of 1864 designated the standard weight per bushel of the different kinds of grain, required all imported grain to be sold by weight and to be weighed by a government official. Most of the provisions are concerned with weighing and measuring, but, since the measurer was required to advise the purchaser on the condition of the grain, the act was a grain inspection act (3). The act did not provide for grading grain. The 1864 act and a

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- (1). For excerpts from this act and a later amendment see appendices #1 and #2.
  - (2). Information supplied through the courtesy of the Provincial Librarian, Halifax, Nova Scotia.
  - (3). R.S. of Nova Scotia, 3rd series, 1864, c 85. "Of the Regulation and Inspection of Provisions, Lumber, Fuel and other Merchandise". See appendix #3 for excerpt of that section of the act concerning grain.





weighers' act (1) of the same year both trace their origin to the act of 1792.

A consumers' inspection act is designed for the protection of the consumer. It may pass the consumers' discrimination back towards the producer, but does so only in achieving its objective, the protection of the consumer.

The present Canadian grain inspection system is a producers' system and developed apart from the consumers' systems in Nova Scotia or other parts of the world. Grain inspection in Nova Scotia had but slight association with the development of grain inspection elsewhere in Canada. However, the sale of grain by weight, now included in the Canada Grain Act, was in all probability instituted in the surplus producing areas of Canada in response to similar legislation enacted by importing countries such as Nova Scotia.

#### PRODUCERS' INSPECTION IN LOWER CANADA.

Commodity inspection in the Canadas differed from that of Nova Scotia and the Maritimes in that it was instituted to further the growth of foreign trade rather

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(1). R.S. of Nova Scotia, 3rd series, 1864, c 11. "An Act providing for the appointment of weighers and measurers of grain".

THE HISTORY OF THE UNITED STATES OF AMERICA

FROM THE FOUNDATION OF THE COLONIES

TO THE PRESENT TIME

BY JAMES M. SMITH

IN TWO VOLUMES

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than to protect the consumer of the article inspected. Inspection was thus limited to that portion of the commodity exported and, as a result, a greater development of inspection occurred in the lower province due to its accessibility to the sea. The changes in the inspection system which took place up to 1841 were inspired by the desire to build up foreign trade. The competition of her competitors forced Canada to adopt these changes if she wished to maintain her position in the foreign market.

The introduction of commodity inspection into Lower Canada may be studied in three periods; 1, The pre-inspection period, closing with the French rule in 1763; 2, The inauguration of inspection in the Province of Quebec between 1763 and 1791; and 3, The extension of inspection to different commodities and the adjustment of the inspection systems to the needs of Lower Canada between 1791 and 1841.

#### 1. New France, ---- 1763.

New France was the second area in Canada opened up for settlement, but commodity inspection was not adopted as a state policy while the colony remained under the administration of the French. Due to environmental conditions crop production fluctuated violently from year to year. In some years wheat was





available for export, in other years crop failures necessitated importations from France. The internal administration of the country was such as to discourage the habitant from producing more than would supply his own needs. When the colony passed into the hands of the English, it could scarcely supply its own needs. In the absence of permanent trade, state controlled inspection of commodities did not develop.

## 2. The Province of Quebec, 1763-1791.

The loss of foreign trade, threatened by the exportation of adulterated and short-weight commodities, prompted the Province of Quebec to adopt commodity inspection. The conditions promoting this action were similar to those described for New York. These conditions, however, were associated with problems peculiar to the Province of Quebec, and centre around the influence of race and religion on governmental policy.

When New France passed into the hands of the English, it was renamed Quebec and given a constitution which permitted the retention of certain old French laws and customs (1). In commercial affairs the old French laws were to govern the French people and the English laws the English people. The clergy and noblesse opposed

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(1). The Quebec Act, 1774.





the English Laws and institutions and protested their use in commercial affairs (1). The Governor, wishing to obtain the goodwill of the French-speaking people, did not enforce the use of the English commercial laws by the English-speaking people. Commercial affairs in the Province of Quebec were governed by the French laws.

The development of commerce in Quebec was obstructed by many obstacles not found in other American colonies. The subjection of a conquered race is usually accompanied, for a short time at least, by a resistance to the rule of the victors. In Quebec there was a lack of respect for laws in general, and the insistence on the retention of their own laws and customs permitted practices injurious to the English merchants. Some of the handicaps to trade were inadequate bankruptcy legislation, the difficulty of settling commercial disputes, and the debasement of coinage.

To escape some of the difficulties obstructing commerce, a plan was advocated of settling disputes out of court. The proposal was submitted in 1777 and 1787 by the merchants of Montreal and Quebec to the English government. It consisted of incorporating Chambers of Commerce clothed with authority to settle certain types

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(1). Adam Shortt & Arthur G. Doughty, Documents relating to the Constitutional History of Canada 1759-1791. Sessional paper #18, 1907; p 404. King's Printer, Ottawa.



of disputes. The idea was not approved of by the English government. The method finally adopted to overcome the friction between the two races was to divide the Province of Quebec into Upper and Lower Canada in the hope that the French-speaking people would observe and adopt the superior laws and customs of the English. This division of the colony cut off Upper Canada from the seaboard and retarded her development of commodity inspection.

Under the administration of the English agriculture was stimulated in the Province of Quebec. Wheat production and exports increased but, at the same time, fluctuated violently from year to year. In 1779 the country suffered such a severe crop failure that it was necessary to import wheat. Wheat prices rose so high and the suffering of the people became so great that government grading and storage was advocated to prevent market corners.

The proposal was submitted by a committee of merchants from Montreal and Quebec (1). They asked for the erection of public grain storage buildings to be placed in charge of well qualified storekeepers who should inspect all grain received, clean it, grade it, and store it. The grades were to be numbered 1, 2 and 3. Wheat thus stored should be delivered to those holding receipts for the

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(1). Adam Shortt & Arthur G. Doughty, Canada and Its Provinces. Edinburgh University Press, 1913. v 4, p 544



different grades, certain deductions being made for waste and shrinkage. Grain not officially graded and certified was not to be exported. These pioneer elevators were to hold between ten and twenty thousand bushels. A similar scheme was proposed again in 1787, but it, like that of 1779, was rejected.

The first inspection act of the Province of Quebec was passed in 1785 (1). Its title indicates its object - "An Ordinance to prevent the exportation of unmerchtable flour and the false taring of bread and flour casks". Another act passed in 1788 (2) provided for the inspection of fish. The contents of these acts are unknown to the writer so their method of operation cannot be discussed. Full details of the early inspection systems of Canada will be given in the next section.

Details are meagre concerning the introduction of these early inspection acts. Undoubtedly they are to be found somewhere in the archives of Canada but they are not available to the writer. It would seem, however, that their introduction was fostered by the merchants of Montreal and Quebec. The merchants conducting the wholesale trade of Canada were English many of whom migrated from the United States where flour inspection

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(1). Statutes, Province of Quebec, 1785, c 6.

(2). Statutes, Province of Quebec, 1788, c 5.





had been practiced for many years. It would seem only natural that they attempt to introduce those practices and customs with which they were agreeably familiar.

### 3. Lower Canada, 1791-1841.

Increased agricultural production and export trade following the growth in population led to an extension of inspection to various commodities entering foreign commerce. Improvements in the inspection systems were necessary to achieve the object of inspection, the preservation of foreign trade.

Britain's loss of the United States colonies and the conquest of New France directed large numbers of her emigrants to the latter, renamed Canada. Following the American War of Independence, large numbers of United Empire Loyalists emigrated to Canada rather than remain under a non-British flag. Emigrants from Britain chose Canada for the same reason. These two movements resulted in a very large increase in the population of Canada. Since agriculture was the chief industry of the country, the large influx of people meant a large increase in agricultural production.

Agriculture in Lower Canada continued on a diversified basis. Wheat, although its production continued to expand until the close of the period (1841), was gradually





being replaced by crops more immune to crop pests and the vicissitudes of nature. As these newer products became discriminated against on the foreign market, they were subjected to inspection to improve their quality. Beef and pork, pot and pearl-ashes, and lumber, in addition to those commodities whose inspection was instituted prior to 1891, were subjected to inspection in Lower Canada (1).

None of the inspection acts passed in Lower Canada dealt with grain, and the delay in extending inspection to that commodity may be attributed to the relatively small volume of production and the ease of ascertaining quality. Hugh Gray (2) reports the average value of commodities exported to Britain and British establishments for the five years ending 1809. These figures show that the export value of wheat was more than double the value of any other inspected commodity exported. The delay in inspecting grain was not due to the small volume produced as compared with that of other commodities, but rather, it was due to the small proportions of savings made or losses prevented to the total value produced. Wheat, threshed by primitive methods, was often contaminated

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(1). See bibliography for list of inspection acts.

(2). Hugh Gray. Letters from Canada, p 180.



with weed seeds and other trash, but these admixtures could be seen and could often be removed by mechanical separation. Moreover, the presence of foreign matter was probably taken care of by dockage or adjustment in price. On the other hand, beef, pork and fish could not be examined without opening the barrel, which examination was difficult due to the nature of the container. Another reason for the delay of grain inspection was that the identity of graded or inspected grain was difficult to maintain, whereas the reverse was true of packaged products. Just what volume of production is necessary to justify grain inspection is not known, but it would be considerably more, expressed in terms of value, than other early inspected commodities. The greatest annual wheat production of Lower Canada between 1791 and 1841 was three and a half million bushels.

The inspection acts of Lower Canada were designed to prevent the falling off in foreign trade threatened by the exportation of commodities adulterated in quality and short in weight. It was also expected that inspection would improve the quality of the commodity produced, but we have seen (p 24) that some inducement must be offered to the individual producer of high quality products to raise the average quality of the country's production.





This may be accomplished by grading. The early Canadian inspection acts inaugurated inspection systems whose dominating function was grading. Grading and the maintenance of the identity of the grades through the channels of trade facilitates the transfer of the consumers' discrimination toward the individual producer. Grades are based on the variations in those qualities preferred by the consumer, and the payment of premiums for those qualities which he prefers tends to discourage the production of those products with inferior qualities. By encouraging the production of high quality and discouraging low quality, grading tends to raise the average quality of the commodity and increase its value on the foreign market. An improvement in the quality of her products increases a country's foreign bargaining power by tending to remove the discrimination against her products. Grading removes the discrimination against the group of producers and places it directly against the individual producers who are responsible, in the absence of grading, for the discrimination against the group.

In the early inspection systems of Canada, the grading of exports was compulsory. The introduction of new practices frequently is opposed by those it injures.





Grading discriminated against producers of low quality products and no individual producing low quality products will voluntarily accept a lower price for that product. Unless grading were compulsory he could export without inspection and defeat the purpose of the act. The greatest social benefit from grading occurs when all the exports are graded but that is only possible by compulsion until the producers realize the advantages of grading as a marketing practice. The inspectors were authorized to board and search any vessel suspected of exporting the commodity ungraded, Shipments of ungraded commodity were subject to forfeiture and the officers of the vessel carrying the ungraded commodity were subject to fine.

A grading act which facilitates the transfer of the consumers' discrimination to the individual producer should establish grades and an inspection service. The grades should be based on the consumers' preference, and the grader or inspector must impartially interpret that preference. In addition to these two functions it is desirable to reduce the friction as much as possible between the producer and consumer or the person who interprets the consumers' preference. Disputes will arise over grading, and, unless settled, will result in a loss of confidence in the service. Where possible some means should be provided for settling



disputes. The inspection acts of Lower Canada fulfilled all these requirements.

A grade is a description of a consumers' preference and the person or body establishing grades should consider the consumers' preference. The consumer does not buy a grade because it is a grade, but because that grade has certain qualities. He accepts grades because grades are or should be based on the qualities which determine his preference.

An act of 1795 (1), one of Canada's earliest inspection acts, designated three grades of pot and pearl-ashes; first sort, second sort, and third sort. The grades were not defined, being named only. Possibly some private instructions or regulations were given inspectors to assist them in their work of grading. These instructions are analagous to those now issued by the chief inspector concerning grade qualifications not contained in the statutory grade definitions. In case such instructions were not issued a tendency existed for variation in the grading of different inspectors and of each inspector at different times during his tenure of office. On the other hand, the tendency to variation was minimized by several factors which promoted uniform grading. There were very few inspectors, few grades,

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(1) Statutes of Lower Canada, 1795, c 2.



and a comparatively small value of the coefficient is required.

Since grades describe and carry the consumers' preference to the producer, the more accurate they are described, the greater the range of discrimination, indicated by price spread, carried to the producer. The line of division between two grades is an arbitrary one. If that line is broad and indistinct there will be considerable overlapping of the grades. When overlapping occurs the averages of the top and bottom grades will be closer together than if the division between the grades is distinct. This point may be illustrated in the following diagram (1).

<u>Variations of quality</u>		<u>Averages of the grades</u>	
	--10--		--10--
	---9---		---9---
Grade X	---8---	--6--	---8---
	---7---	--7.5--	---7---
	---6---		---6---
	---5---		---5---
	---4---		---4---
Grade Y	---3---	--3.5--	---3---
	---2---		---2---
	---1---		---1---
Situation "A"		Situation "B"	

Suppose there be 10 variations of quality divided between the two grades, and that we assign a numerical value to each unit of variation. In situation "A" the line of division between the grades is distinct and five variations of quality enter each grade. Assuming the

(1) The validity of this illustration depends on certain special assumptions which may not correspond with actual conditions.





the quantities of each variation are equal, the average quality of grade X is 8.0 and of grade Y 3.0. The difference between the two averages is five units of variation. Where the line of division between the two grades is indistinct as in situation "B", six or more variations of quality may enter each grade. The averages of the grades are 7.5 and 3.5 and the difference between the two averages is four units of variation. Distinct division between grades results in <sup>a greater</sup> range of quality between the averages of the top and bottom grades.

The object of grading is to encourage high quality production by the transfer of the consumers' discrimination to the producer. If the range of the consumers' discrimination is narrowed by the use of indistinct or broad grade divisions, the grading system does not fully accomplish its object. The defect is partially corrected by defining grades.

Grades were first defined by statute in Canada in an inspection act of 1804 (1) for beef and pork. The proportions of the various cuts of meat were prescribed for the different grades (2).

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(1) Statutes of Lower Canada, 1804, c 9.

(2) The second and third grades of beef contained some of the neck and flank along with choice cuts of meat.



"Mess beef shall consist of the choicest pieces Of Oxen, Cows or Steers well fattened, the shin, shoulder, clod and neck shall be taken from the forequarters, and the legs and leg-rounds from the hindquarters,..."

Of all the commodities graded during the introductory period of inspection in Canada, grades were defined for only beef and pork. The necessity of grade definitions seems to be imposed by the variable nature of the commodity itself. Beef is beef no matter from what part of the animal it is secured, yet it is difficult to think of beef without associating it with that part of the carcass from which it originated. With the great variation in the value of the cuts of beef and the contents of barrels of beef, undefined grades tended to overlap and nullify the results of grading. Grades described by definitions promote closer grading by an inspector and more uniform grading by different inspectors. There is less overlapping of grades with the result that the averages of the different grades exhibit a wide range of quality. The greater the range of quality between the top and bottom grades, the greater the range of price spread carried by the grades to the producer.

Two terms, commonly used to-day in the grading of grain, became associated with commodity inspection during this early period. The word "Rejected" was associated first with commodity grading in 1806 when inspectors were



directed to brand such flour found to be unsound or unmerchantable (1). After 1818 (2) it was permissible to export rejected flour. In classifying a certain quality of flour as rejected this term came into use as the name of a grade. In 1829 (3) inspectors were directed to "brand the word 'condemned' on every cask which he shall discover to contain Ashes fraudulently adulterated with stone, sand, lime or any other improper substance".

During the introductory period of commodity inspection in Canada, the grades or their definitions did not change. Although inspection was extended to five groups of commodities (4), grades were defined by statute for only one group, beef and pork. The changes in grades occurred later in the development of commodity inspection.

The second essential of a grading system is the establishment of an inspection service. Someone must grade the commodity and the person who has performed this service throughout the history of inspection is the inspector or his deputy. It is essential that the inspector properly perform his duties and to achieve this end,

(1) Statutes of Lower Canada, 1806, c 4, s 7.

(2) Statutes of Lower Canada, 1818, c 3, s 10.

(3) Statutes of Lower Canada, 1829, c 36, s 9.

(4) Lumber, fish and oil, flour and meal, beef and pork, pot and pearl ashes.





numerous regulations were incorporated in the inspection acts defining his duties, qualifications and appointment.

In 1795 (1) inspectors were appointed by the government, and they have been appointed by the government to this day with the exception of a period from 1841 to 1873. The act mentions no board of examiners to pass judgment on an inspector's qualifications, but undoubtedly the government considered his fitness for the position when making the appointment. He was remunerated for his services through the collection of fees which were definitely stated in the act (2). He was required to take an oath of office in which he swore not to deal in any way in the commodities he inspected. These regulations tended to secure impartial judgment on the part of the inspector. These provisions were embodied in all the inspection acts passed in both Upper and Lower Canada for the succeeding twenty years.

In the year 1818 the flour inspection act was amended (3) to provide for the appointment of a board of examiners to examine candidates for the office of inspector.

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(1) Statutes of Lower Canada, 1795, c 2.

(2) Statutes of Lower Canada, 1818, c 3.

(3) Fees for inspecting all commodities were at first paid directly to the inspector. Since 1899 fees for inspecting grain have been paid into an inspection fund administered by the government or Board of Grain Commissioners and the inspector remunerated by a fixed salary.



This board was created to ensure the appointment of capable and efficient inspectors and to avoid the possibility of appointing those unqualified for the position. Inspectors in 1839 were required to "furnish sureties for the fulfilment of the duties of their office,..." (1).

Deputy inspectors were appointed by the inspector but the appointment was confirmed by the government. The inspector was held responsible for the acts of his deputy. The deputy was an employee of the inspector. He had to be recommended by the board of examiners, take oath of office, furnish sureties to the inspector, and was paid by the inspector.

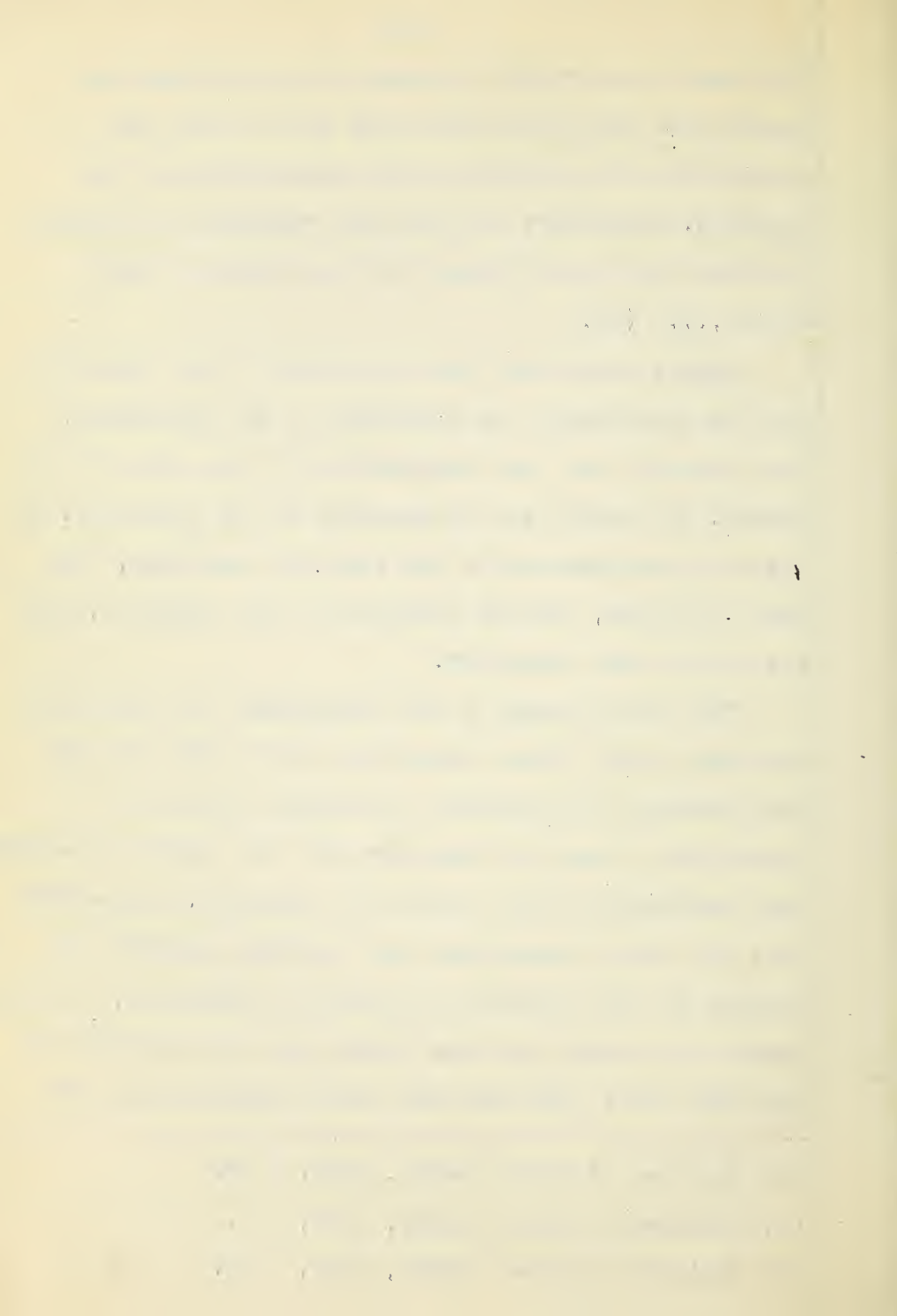
The first change in the appointment of inspectors was made in the flour inspection act of 1818 (2) when the Governor was empowered to appoint persons to constitute a Board of Examiners for the purpose of examining candidates for the office of inspector. Inspection acts for other commodities were quickly amended to provide for the creation of Boards of Examiners, but the number of members on these Boards was not specified in the acts until 1824 when the flour inspection act (3)

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(1) Statutes of Lower Canada, 1839, c 10.

(2) Statutes of Lower Canada, 1818, c 3.

(3) Statutes of Lower Canada, 1824, c 11.



called for the appointment of at least five skilful persons. One may surmise the reasons for the formation of the Boards of Examiners. Hitherto inspectors had been appointed directly by the government. In making appointments, the government undoubtedly took into consideration a candidate's qualification for the position, but it is probable that appointments were influenced by party politics. There was a possibility of appointing inefficient inspectors and this danger would very likely be overcome by an examination of the candidates before appointment.

These early Boards of Examiners were not paid for their services. In their oath of office they swore not to "receive any fee, reward, or gratuity whatever, by reason on any function of my office of examiner..." (1). Inspectors were appointed or "commissioned" for an indefinite number of years so that examinations of inspectors were infrequent. The examiners could also require the attendance of experts to assist with examinations.

Commodity inspection is a service which cannot be performed free of cost. When the service is operated by the government the costs may be borne out of the general revenue of the country or they may be levied as a direct charge against the article inspected. Wherever possible  
 (1) Statutes of Lower Canada, 1839, c 10.





it has been the policy of governments to charge inspection costs to the person or article concerned. This is especially true when governments have limited revenues as they were during the early history of Canada. In cases where a service, such as grading, is directly beneficial to a particular group of its citizens, the cost of that service should be borne by the group who receive the direct benefit.

Inspection costs have been levied as a direct charge against the inspected commodity ever since this service was first introduced into Canada. Early inspection costs were paid for by "the person or persons applying to the Inspector to make such inspection" (1). These costs were in the nature of fees and were paid direct to the inspector, "the said Inspector shall have and receive sixpence current money for every hundred weight of Pot or Pearl ashes so inspected" (2). The fees were definitely stated in the act.

The regulations governing the inspector were all for the purpose of ensuring his impartial judgment. His oath of office, surety, qualifications and manner of appointment achieved that purpose.

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(1) Statutes of Lower Canada, 1795, c 2, s 2.

(2) Ibid.



Commodity inspection is an activity which is dependent on the exercise of human judgment. Inspectors, being human, are subject to the human frailty of making mistakes, but, provision has been made in all our inspection acts to reduce inspector's mistakes to a minimum. The rigid qualifications required of inspectors tends to minimize accidental mistakes, and the prevention of his dealing in any way in the commodity he inspects tends to reduce intentional mistakes. Inspectors, however, are not the only persons who make mistakes. A mistake may be made by the person who challenges the inspector's judgment.

Mistakes in grading, regardless of who makes them, lead to disputes. Mistakes must be corrected and disputes must be settled if confidence is to be maintained in the grading system. Mistakes and disputes are most amiably adjusted by arbitration, usually a third disinterested party. This practice is followed in the grading system.

Our modern civilization has established a third disinterested party, the law courts, for the settlement of disputes, but, there are many objections to the use of the law courts for the settlement of trade disputes. The courts are expensive, act slowly, and often lack the technical knowledge required for an authoritative verdict



on certain types of trade disputes. The settlement of disputes over the grading of commodities requires a specific form of knowledge not usually possessed by the law courts. To avoid the objections to the use of the law courts, special courts known as boards of arbitration have been set up in the inspection systems to settle disputes over grading.

A board of arbitration to settle grading disputes was established by the inspection act of 1795. The formation and operation of this board was based on the following principles: the board passing judgment on the dispute was composed of representatives of both parties of the dispute and of the person or body authorizing such board to act; the judgment of the board was final; the cost of the appeal was borne by the loser of the appeal (1). These principles have been adhered to during the whole history of commodity inspection in Canada, but the manner of putting these principles into practice has varied from time to time (2). The method of settling

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(1) See Appendix 4 for excerpt of that section of the act dealing with disputes.

(2) The modern grain appeal tribunal is composed of representatives of the buyers (grain dealers), sellers (farmers), and the body (government) authorizing the formation of such tribunal. Technically there has been no deviation from the principles laid down in 1795 but in actual practice the quorum of three which decides on a particular case may not include a farmer representative.





grading disputes adopted in the inspection act of 1795 was followed in all the inspection acts of Lower Canada. No changes were made in the method until after 1841.

#### COMMODITY INSPECTION IN UPPER CANADA.

Upper Canada early adopted commodity inspection but her inland location retarded the development and improvement of her inspection systems. However, she was the first surplus grain producing area in Canada to inaugurate the sale of grain by weight, a practice which improved the marketing of that commodity.

Being under the same necessity as other colonies of developing foreign trade, Upper Canada passed legislation providing for the inspection of several commodities(1). In many respects the inspection systems established in Upper Canada during this period were similar to those of the lower province. In other respects, however, they differed from those of the older colony by the omission of several important features of commodity inspection. They provided no means of settling disputes between inspectors and the public, grades were named only, and the regulations governing inspectors scarcely changed

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(1) Flour, Pot and Pearl Ashes; Beef and Pork; and Fish. See bibliography for complete list of inspection acts and amendments with date of enactment.



during the life of the acts. No boards of examiners were provided. Lower Canada frequently amended her various inspection acts to adjust her inspection systems to changing conditions and to incorporate new features developed in the technique of inspection. The inspection acts of the upper province remained comparatively static (1).

The simple statical nature of the Upper Canadian inspection acts indicates that the inspection systems operating under them were not extensively used (2). Upper Canada had no seaport and practically all her exports had to pass through Montreal. Since inspection was not necessary for domestic consumption, products for export may have been regularly inspected at Montreal under the inspection laws of Lower Canada. With her export products inspected under the laws of a neighboring province, there would be little demand for change in the inspection systems and laws of Upper Canada. She contributed little to the improvement of existing

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(1) The comparative activity of inspection legislation in Upper and Lower Canada is indicated by the number of acts and amendments passed. See bibliography.

(2) If commodities are not inspected, or if there be no increase in the quantity of commodity inspected, there will be no change in inspection acts. The production and marketing of Pot and Pearl ashes has not increased during the past 60 years and the acts governing the inspection of these commodities for 1873 and 1927 are practically identical.



inspection systems, but took a step in another direction which later was embodied in grain inspection.

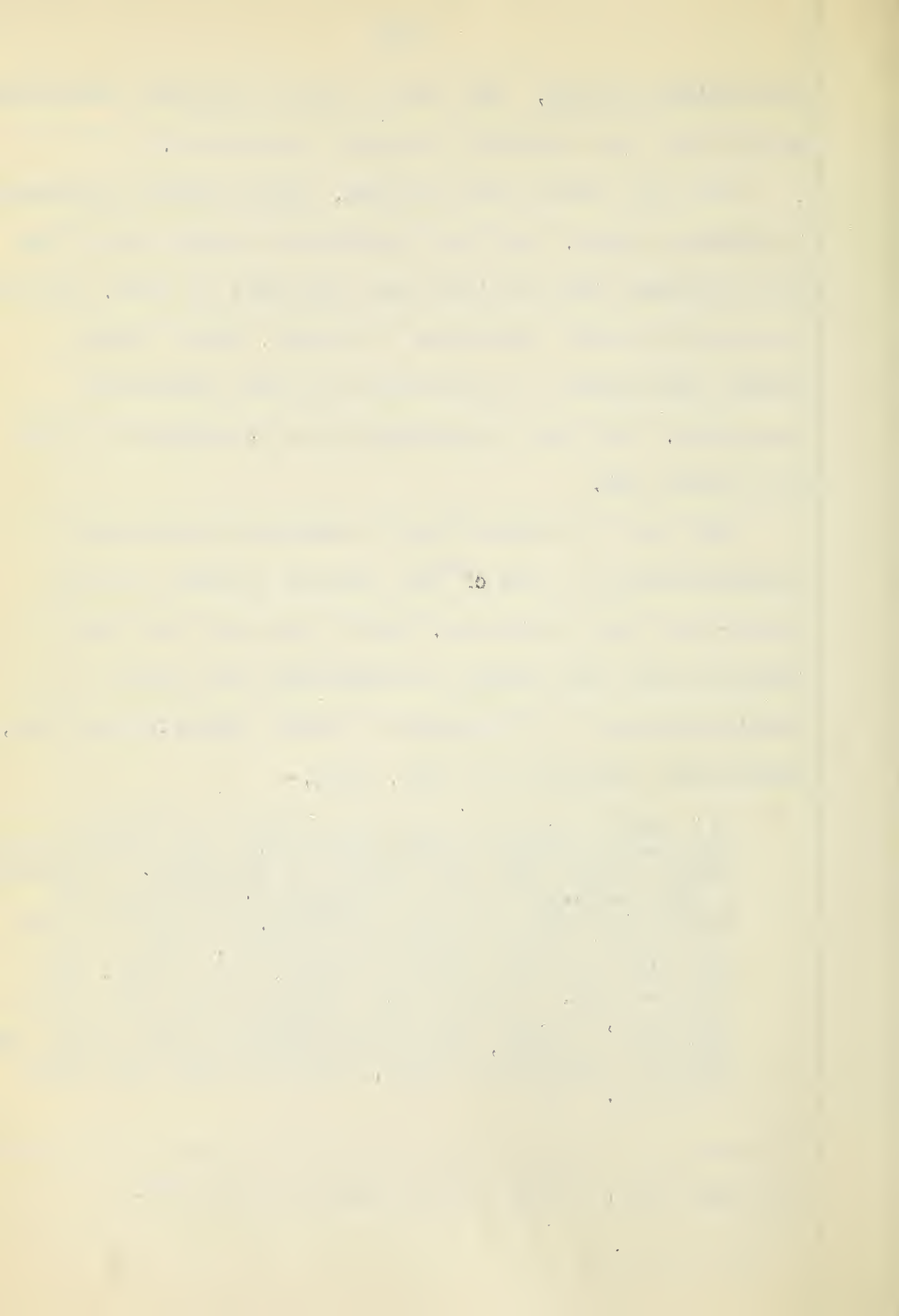
. Like all other new colonies, Upper Canada proceeded to produce grain. Her wheat production began about 1780 and surpassed that of the lower province in 1840. With an outlook for large increases in supply, Upper Canada sought some means of improving her wheat marketing technique. The first improvement was introduced in 1835 by a sales act.

The sale of commodities by measure ascertained volumetrically is one of the customs brought to this country by early settlers. While practical for small transactions this method of measuring was found unsatisfactory for shipments of large volume. Hugh Gray, describing measuring in 1808, says,-

"It seldom happens that the number of bushels shipped at Quebec holds out at the port of delivery, which arises from the manner of measuring in Canada. A half bushell is used in general; and they are extremely dexterous in measuring. The grain is put in and out of the bushel so quickly, that it has not time to feel its own weight, as it were, and settle down. I know of an instance of a man having measured, and put into the sacks in which it is carried on board, 6400 half bushels in the space of eleven hours and a half, which is near ten times a minute." (1)

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(1) Hugh Gray, Letters from Canada, pp 200-201.





Grain has long been sold by the bushel, but it only since 1835 that the bushel has been determined by weight in the grain exporting areas of Canada. The system of measuring described by Gray resulted in short-measure shipments. The foreign consumer in self-protection devised a system of sale by weight, although the weight was expressed in a capacity standard. Nova Scotia adopted sale by weight for grain as early as 1792. The shortness of Canadian grain shipments was found through the purchase by weight in the importing countries. To put her marketing technique on the same basis as that of her foreign customers, Upper Canada in 1835 (1) adopted the practice of selling grain by weight expressed in bushels.

The sale of grain by weight expressed in bushels necessitates some definite relationship between pounds and bushels. The statute providing for the sale of grain by weight established a standard weight per bushel for the different kinds of grain. The preamble of this act indicates the manner of determining the standard weight per bushel :-

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(1) Statutes of Upper Canada, 1835, c 7.



"Whereas it is expedient and necessary that a uniform standard weight, equivalent to the Winchester bushel, should be established for the different kinds of grain and pulse exposed for sale..." (1).

While the standard weight per bushel established in Upper Canada in 1835 may have been determined from weighing a bushel of Canadian grain, it is probable that the standard weight per bushel of grain in foreign countries was considered in establishing the same in Upper Canada. The shortage of the grain shipments from Canada were due to the difference in the method of determining the quantity of the shipments at Canadian ports and at ports of delivery. When Hugh Gray wrote in 1809 and until 1835, the number of bushels in a shipment was determined with half or bushel measures. Nova Scotia since 1792 and other importing countries determined the number of bushels by weight as we do to-day.

The standard weight per bushel of the different grains established in 1835 have remained unchanged until the present day (2). No standards were established for buckwheat or flax because these grains at that time were not important in the commerce of Upper Canada.

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(1) Statutes of Upper Canada, 1835, c 7.

(2) See table #2, Appendix, for the weights per bushel established for the different grains.



D. ACTS RELATED TO COMMODITY INSPECTION.

The Canada Grain Act is most closely associated with the early commodity inspection acts, but, there are several other groups of acts which have played a part in the development of grain inspection. One of these groups deals with weights and measures.

Our weights and measures acts were introduced to overcome a situation existing during the latter part of the 18th century. This situation existed in all the Canadian colonies and that of Quebec is typical of what occurred elsewhere. The Quebec Act of 1774 permitted the retention of certain Canadian customs which included the use of Canadian weights and measures. English weights and measures were introduced after New France was ceded to England. Both sets of weights and measures were in constant use. Considerable confusion was created by the use of different standards of weights and measures although such confusion was not to be compared with the difficulties that arose from variations in each standard.

The situation is well expressed in a report of the Merchants of Quebec presented in 1787 to the Committee of Council (1) in the latter's investigation of

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(1) Committee of the Legislative Council.





commercial affairs. The report, in part, is as follows;-

"Article 16th. That a standard should be fixed for Weights and Measures throughout the Province.

Observation - To regulate the Weights and Measures on a permanent Basis throughout this Province would tend to the facility of commerce and the prevention of frauds. Great abuses exist at this time, scarce two weights or two measures are found exactly alike - It is not the use of French measures for grain, etc., and English Weight for Flour and the like that creates difficulties, The custom has been long understood, and well established in those particulars, but it is the irregularity thereof that requires amendment." (1)

Lower Canada in 1779, adopted the Avoirdupois pound and two standards of capacity, the Winchester bushel and the Canada minot. The act provided (2) -

"...the Canada minot hereinalso before mentioned ... shall be held and considered as the standard measure of this Province for measuring all rents payable in Wheat or other grain of any kind and also for measuring of all Salt, Wheat, --- or other grain of feed... where no special contract or agreement has heretofore been or shall hereafter be made to the contrary..."

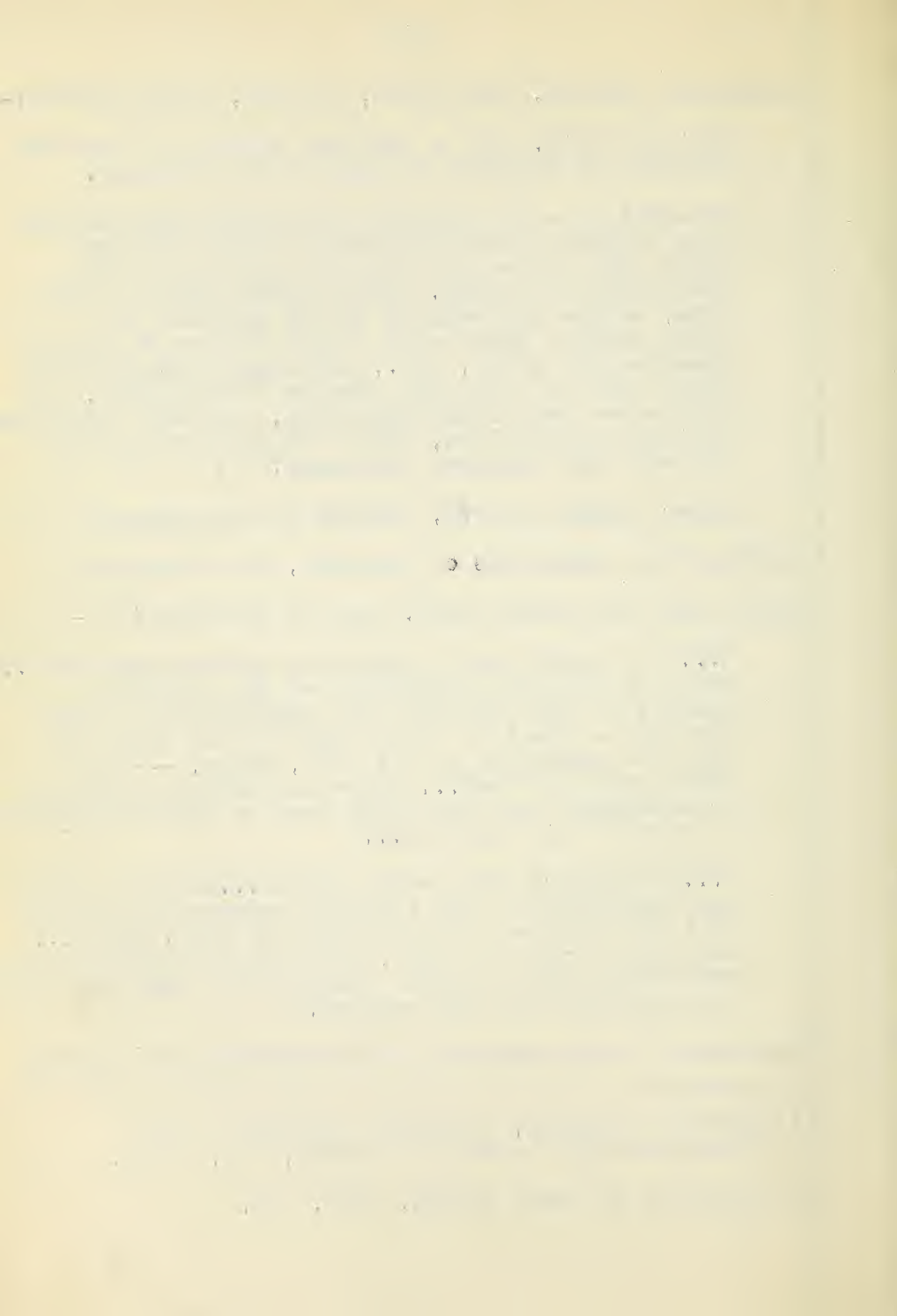
"...the English Winchester bushel...shall be held and considered as the standard measure of capacity in this Province for measuring all Salt, Wheat.. and other grain or feeds, where such articles have heretofore been or shall hereafter be specially sold or contracted by such measure."

The reason for the adoption of two measures of capacity

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(1) Shortt & Doughty, Documents relating to the Constitutional History of Canada, v 3, p 617.

(2) Statutes of Lower Canada, 1792, c 7.



in Lower Canada is that both were in common use. The Canada minot had long been in use in New France and the Province of Quebec, and was employed by and familiar to a larger portion of the population than was the Winchester bushel. The Winchester bushel was introduced into Quebec after 1763 and was, up until 1799, used principally by the English, a minor portion of the population.

Variations in weights and measures existed in Upper Canada as well as in the lower province, but it was Upper Canada that made the first move to correct the situation. In 1792 (1) she passed "An Act to Establish the Winchester Measure and a Standard for other Weights and Measures throughout this Province". Upper Canada adopted the Winchester bushel as the standard of dry measure and the avoirdupois pound as the standard of weight. Unlike Lower Canada, she adopted only one set of standards because her population was predominately English and only English weights and measures were in common use.

The object of the Upper Canadian act was to obtain "an uniformity of weights and measures". The first act (1792) was found ineffectual to the attainment of that object" because no official standards were secured with which to compare those in commercial use. This difficulty was remedied in 1823 (2) by an appropriation for the

(1) Statutes of Upper Canada, 1792, c 3.

(2) Statutes of Upper Canada, 1823, c 16.



purchase of a set of official standards. The Secretary of the Province was to furnish, at the district's expense, a set of standards to each district to be used by the inspector of weights and measures of that district.

The weights and measures acts of Canada were not associated directly with inspection acts but they were closely linked up with the sale of commodities. The same reasoning may be applied to weights and measures as was applied to the bulking of variations in quality of a commodity into one class. If there is no standard weight or measure or if there is no penalty for failing to use the standardized weight or measure, the tendency will be for the weights and measures to become smaller and smaller. The average bushel or the average pound will decrease. To protect himself against fluctuations in weight or measure, the consumer will adjust his price accordingly. He may even go so far as to discriminate against certain light weights and measures. The standardization of weights and measures is a necessary adjunct to the transfer of the consumer's discrimination to the individual producer.





## Chapter 4.

### COMMODITY INSPECTION UNDER THE SUPERVISION OF COMMERCIAL ORGANIZATIONS.

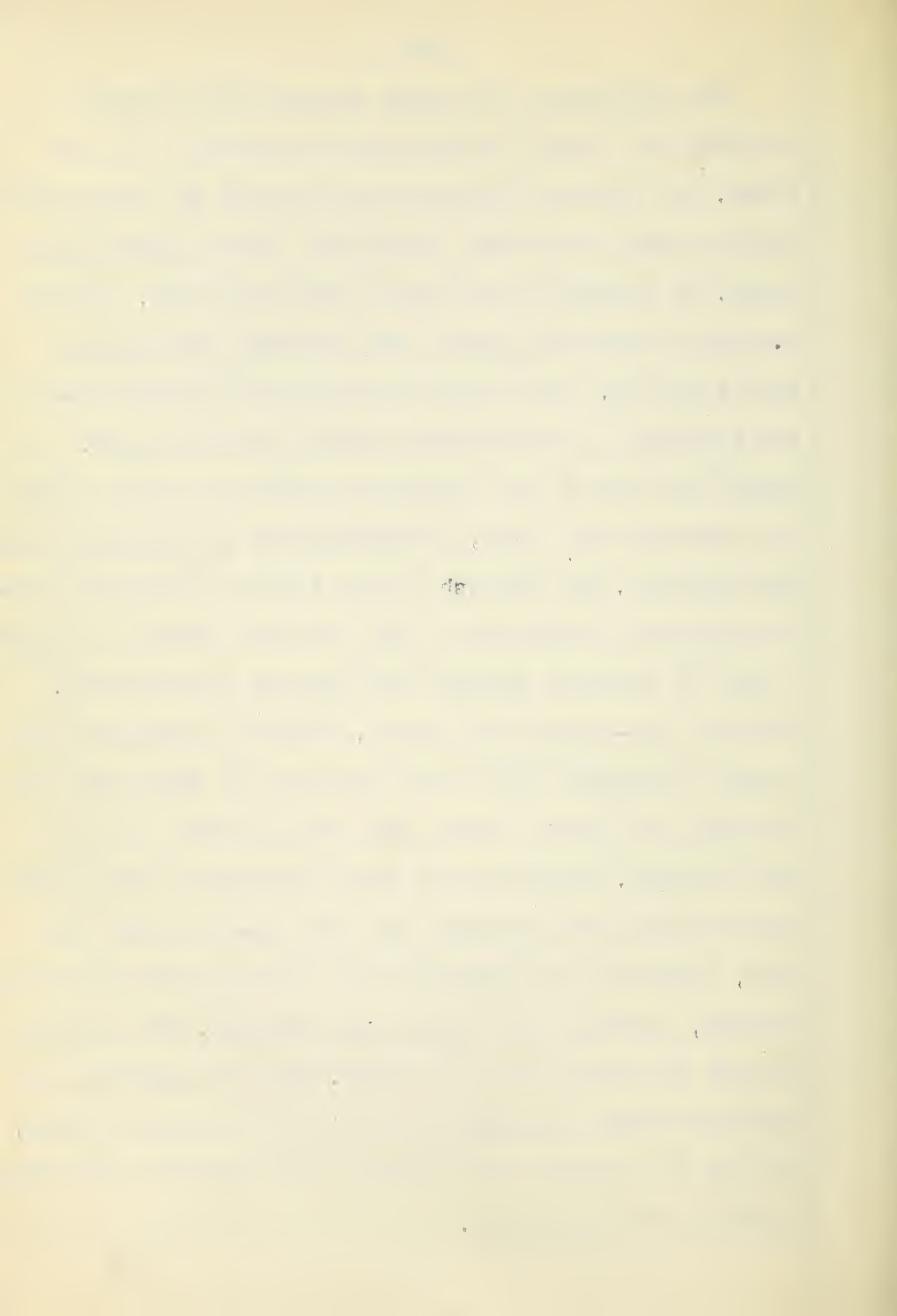
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The demand of commerce and agriculture for a more efficient marketing system to meet a situation of low prices introduced changes in both the practice and supervision of commodity inspection. A closer supervision of inspection was obtained by delegating certain powers to local commercial organizations. This change together with the adoption of improved inspection technique carried the consumer's discrimination closer to the individual producer. Both changes were incident to the growth and development of the country.

The growth and development of a new country is visible in many forms of human activity. Institutions become adapted to the changing conditions of economic, political and social life. Various organizations come into existence seeking the removal of impediments to trade and industry. The increase in population necessitates more government and countries with democratic ideals will delegate certain administrative and legislative duties to local self-governing bodies. These and many other changes characterize the growth and development of the Province of Canada during the period from 1841 to 1863.

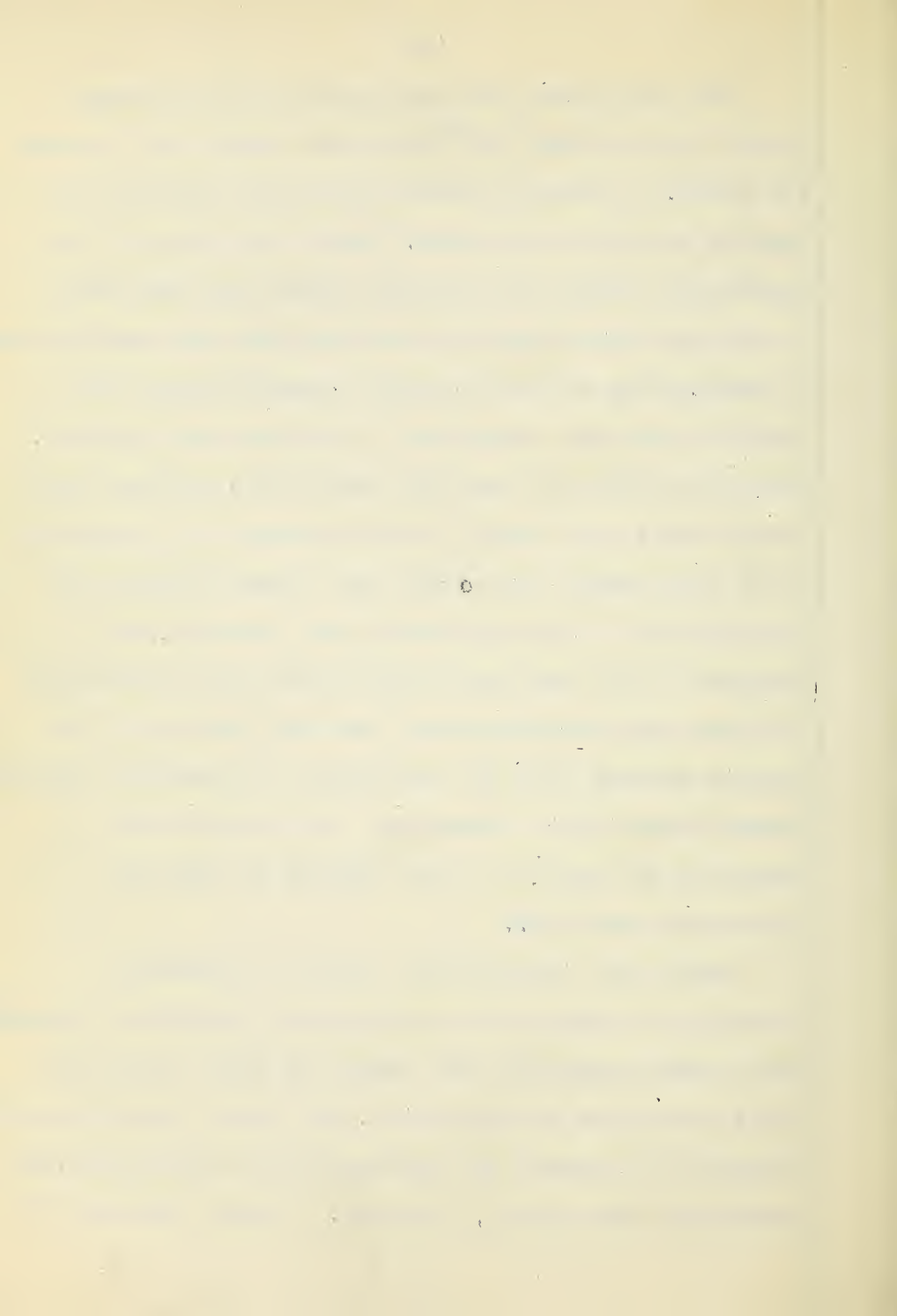


The settlement of Canada occurred in a period favoring the spread of European civilization to new lands. The growing industries encouraged the colonization of new lands to provide markets for their manufactured goods. On becoming more highly industrialized, certain European countries became more dependant on foreign food supplies. Cheap ocean transportation facilitated the exchange of commodities between distant lands. Canada was one of the countries affected by this growth of international trade, but her growth was predominately agricultural. The English policy did not look with favor on industrial expansion in the colonies because it meant a loss of overseas markets for English manufactures. With her one-sided development, Canada's prosperity was largely dependant on foreign markets and these were not favorable to Canada during the early forties of the 19th century. Canada had to meet competition from other exporters of raw materials and the repeal of the corn laws, removing the preference she enjoyed with the mother country, weakened her bargaining strength. The economic outlook in Canada was not bright. She was powerless to improve matters dependant on factors of foreign origin, but she did improve her marketing machinery to partially alleviate the situation.



The development and maintenance of her foreign market is a problem that <sup>has</sup> confronted Canada for the past 150 years. In several periods during her history the problem has been very acute. Toward the close of the eighteenth century her foreign market was threatened by adverse discrimination resulting from the exportation of adulterated and short-weight commodities and she adopted commodity inspection to relieve the situation. About the middle of the 19th century the problem again became acute as a result of her weakness in competing on an open market due to the poor classification and unreliability of the quality of her products. Her strongest rival was the United States whose dominating position was strengthened by the high quality of her exports secured with the assistance of commodity inspection. Canada attempted to strengthen her position by improving the quality of her exports by improved inspection practices.

During the introductory period of commodity inspection in Canada the advocates on inspection changed their views respecting the manner by which inspection would accomplish its objective. The early inspection acts attempted to prevent the exportation of adulterated, and presumably low quality, products. A strict adherence to





this policy would defeat the purpose for which the acts were established. Low quality in agricultural products may be the result of nature's caprice and not the wilful deterioration by man. Under similar circumstances the domestic consumer has just as strong a preference for high quality as the foreigner. What is to become of a large portion of a product having low quality as a result of unfavorable climate if it cannot be exported? If exports are confined to the high quality portion of a product, it is conceivable that the total volume and value of a product exported may be less than if exportation is unrestricted. When this was discovered emphasis was shifted to grading which tended to increase export values by the encouragement of high quality production. As a consequence of this change of attitude it became permissible to export Rejected and Condemned grades.

As long as an institution assists the development of an industry, that institution will grow and develop with the industry. By facilitating the transfer of the consumer's discrimination to the individual producer, commodity inspection tends to improve the quality of the product and enable the industry to compete more successfully with similar industries in foreign countries. Canada was confronted with foreign competition and she met that competition by adapting existing institutions



to the problems of the day. The two institutions we are particularly concerned with during the period of 1841 to 1863 are the Boards of Trade and commodity inspection.

### The Boards of Trade.

One form of development found in a new progressive country is the growth of her institutions. People organize themselves into associations to achieve a common objective unattainable by individual effort. An organization that meets with some measure of success has new objectives thrust upon it. This is especially true if the organization is the sole representative of a particular industry or trade.

One of the institutions springing up in the early commercial life of Canada was the Board of Trade. As its name suggests, this organization is interested in commercial affairs. Its objective is to promote the welfare of the community which is advanced by following two courses of action - attracting trade to the community, and regulating trade. It is in the latter activity that the Board of Trade exerted its influence on commodity inspection.

The Board of Trade or Chamber of Commerce idea was conceived in the early years of the Christian era (1).

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(1) Program of Activities for Canadian Boards of Trade and Chambers of Commerce - The Canadian Chamber of Commerce, Montreal, 1929.



Certain silversmiths met in the market place of Ephesus and, fearful lest the influence of Paul's teachings would turn many away from the worship of idols, protested against his doctrines and tried to get an injunction against him. Later developments of the idea are found in the Mediaeval Guilds, in the Hanseatic towns of the Middle Ages, and, from the close of the 14th century, in the organization of Chambers of Commerce in continental Europe. The Anglo-Saxon race is responsible for the development of Boards of Trade or Chambers of Commerce as we know them, i.e., voluntary organizations without government assistance. St. Helier of the Channel Islands and New York each had a Chamber of Commerce in 1769, Glasgow in 1783 and Montreal in 1822.

The desire for better trade regulation led to the first attempt to form a Board of Trade in Canada. In the natural course of business, disputes do arise. The courts provide a means of settling disputes but they act very slowly and are very costly. Added to this handicap was the existence of the old French civil law under which business was forced to operate during the early years of British rule in Canada. In 1777, and again in 1787, a committee of merchants from Montreal and Quebec sought permission to organize a Chamber of Commerce with authority to establish a board of arbitration for the





settlement of disputes out of court (1). The scheme was rejected because the government feared a conflict <sup>between</sup> the civil courts and the proposed commercial courts.

During the first quarter of the 19th century two Boards of Trade were organized in Canada. The Quebec Chamber of Commerce was formed in 1809 (2) and the Montreal Committee of Trade in 1822 (3). Neither organization possessed authority to regulate trade but they suggested changes for the improvement of trade relations. In 1841 both organizations were incorporated by special statute as Boards of Trade with authority to appoint boards of examiners to examine candidates for the office of inspector, and to appoint a board of arbitration to settle certain types of trade disputes. From 1841 to 1874 some seventeen Boards of Trade were incorporated by special statute. In the latter year a general Act made it unnecessary to incorporate such organizations each by special statute.

The Board of Trade's association with commodity inspection has been through their board of examiners.

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(1) Canada and Its Provinces, v 4, pp 531 and 545.

(2) P.G.Roy, Bulletin des recherches historiques, october, 1925, pp 393-395.

(3) Program of Activities for Canadian Boards of Trade and Chambers of Commerce.



At first the duties of the examiners were confined to the examination of candidates for the office of inspector. Later their duties were extended to include the arbitration of disputes over grading and the approval of standard samples selected by the inspector. For a short time the Council of the Board of Trade appointed inspectors. Through their examiners the Boards of Trade supervised the inspection service to promote the transfer of a greater range of the consumer's discrimination closer to the individual producer.

#### The Inspection System.

The demand for improved trade regulations resulted in changes in all branches of the inspection system. The changes were all designed to widen the range of the consumer's discrimination transferred by the grades to the individual producer. The grades were improved by definition and by the use of standard samples. Both these devices tended to distinguish more definitely the line of division between grades. The need for closer supervision of commodity inspection to promote a more impartial judgment in the work of grading prompted the government to delegate the supervision of inspection to local commercial organizations, interested in the operation of that service. Additional means were provided for the



settlement of disputes, and grading was extended to many commodities for the first time.

Canada introduced commodity inspection to improve her foreign trade by removing the cause of the foreign consumer's discrimination against her products. She did not accomplish this objective by preventing the exportation of adulterated, low quality or short-weight commodities, but by improving the average quality of exports through shifting the discrimination, by grading, against Canadian producers as a group to individual producers. Compulsory inspection played its part in introducing the system, but, once inspection became established and the public realized the benefits of grading, it is doubtful whether compulsion was necessary to maintain grading as a marketing practice. The premiums received for products of superior quality is an inducement to continue the grading system. After 1841 commodity inspection was not compulsory.

During the period of 1841-1863 the greatest change in the inspection system occurred in the grades. The grades are the medium for carrying the consumer's preference to the producer. Improvements in grades are consequently quite effective in facilitating the transfer of the consumer's discrimination to the individual producer. Until 1841 definitions had been used for





describing the grades of only one commodity, but following 1841 the grades of many commodities were described by definition.

In addition to definition grades may be described by standard samples which were first employed in the Canadian grading systems in 1841. A statute (1) of that year provided,-

"...and it shall be the duty of each of the said inspectors of Flour and meal, to govern himself so far as may be possible to one uniform standard of quality for each description of flour and meal..."

In 1848 inspectors were further instructed (2),-

"to procure proper samples of Flour of the several qualities aforesaid, inspected in New York, and to guide himself by such samples."

Two years later (3), inspectors were required to select or make up their own standard samples for the grades named and defined by statute. A consolidating statute of 1859 (4) made the selection of standard samples subject to the approval of the board of examiners.

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(1) Statutes, Province of Canada, 1841, c 89.

(2) Statutes, Province of Canada, 1848, c 6.

(3) Statutes, Province of Canada, 1850, c 29.

(4) Statutes, Province of Canada, 1859, c 26.



A standard sample (1) is a sample selected to exhibit physically those properties and qualifications of a grade. In other words, it describes a grade. Our other common method of describing grades is definition. Grades are described by both methods, depending on the nature of the commodity. At one extreme are perishable commodities, such as live hogs, whose grades cannot be described by sample because the sample itself is perishable. At the other extreme are commodities whose grades cannot be described adequately by definition because of the difficulty of expressing variations in those properties characteristic of the commodity. Between these two extremes is a group of commodities whose grades can be described most effectively by a combination of definition and sample. Standard samples were first employed to describe flour grades but the practice soon was adopted for other commodities.

Another means adopted in 1841 of utilizing the inspection system to improve economic conditions involved a closer supervision of inspection to increase the inducement for high quality production through the

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- (1) Some ambiguity exists in the interpretation of the term "Standard". To some it means a sample while to others it is a grade definition. "Standard" is used here with the former meaning, but to avoid confusion it will be referred to as a "standard" sample.



transfer of a more intensified consumer's discrimination to the producer. Until 1840, the Canadian grading systems were operated by inspectors without any very considerable supervision. The inspection systems were controlled by statute but poor transportation and communication facilities prevented close supervision from the seat of government. Government supervision of inspection became more difficult after the union of Upper and Lower Canada on account of the increased area under one administration. The financial plight of the government in the early forties deterred it from setting up its own organization to supervise commodity inspection. Realizing the need for closer supervision and considering the financial and geographical handicaps, the government delegated the supervision of commodity inspection to a private local commercial organization with which they clothed with special powers. This organization was the Board of Trade.

Following out the policy of local supervision, corresponding changes were made in the inspection service. In 1841 inspectors were appointed by the Mayor of the cities or the Warden or Chief Municipal Officer of any other place where inspection was authorized (1).

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(1) Statutes, Province of Canada, 1841, c's 88 & 89, 1842, c 6.





The boards of examiners were appointed by the Board of Trade instead of formerly by the government. The Board of Trade was authorized to elect from among its members a board of arbitration with -

"power to arbitrate upon and give their award in any commercial case or difference which shall be voluntarily referred to them by the parties concerned."

Disputes respecting grading were not referred, for some time, to this new board of arbitration. Inspection acts enacted or amended in the years immediately following 1841 continued to provide for the formation of a board of arbitration appointed by a Justice of the Peace to settle disputes over grading. Before grading was extended to grain, disputes over grading were settled by the board of examiners acting as a board of arbitration.

A change in one other act of this period should be noted. The act of Upper Canada (1) establishing the standard weight of grain was passed again in the legislature of the Province of Canada. At first (2) it only applied to Upper Canada but the following year, 1854, it was amended to include Lower Canada as well. A standard weight per bushel for buckwheat appeared for the first time. This crop had long been grown but had

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(1) Statutes of Upper Canada, 1835, c 7.

(2) Statutes, Province of Canada, 1853, c 193.



been unimportant in commercial trade channels. The establishment of a standard weight per bushel indicated that buckwheat was finding its way into commerce.

Grading brought to the shores of Canada the discrimination, both favorable and otherwise, of the consumer but, when first introduced, it is questionable whether the favorable discrimination was passed back to the initial producer. Grading was performed at a few seaports and, unless that grading was anticipated in the interior (1), it is doubtful whether the benefits from grading left the hands of the exporter who possessed the commodity when graded. Acting in his own self-interest the exporter would attempt to retain for himself any benefit in price resulting from grading. Competition for business would eventually induce the exporters to pass part, perhaps all, of the benefit towards the producer.

The premiums paid by the consumer for high quality products eventually reach the producer but they must first pass through the hands of the middlemen before doing so. Each group of middlemen will retain the premiums for themselves as long as possible. Competition, however,

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(1) A good example of anticipated grading is found today in the Canadian grain trade. In buying grain the country elevator agent anticipates the grade he expects to receive when the grain is later submitted for official grading.



will then force them to pass the premiums to the next group in the marketing chain located closer to the producer. Toward the close of the introductory period of inspection in Canada the discrimination of the consumer was passed from the exporter situated at the seaboard ports to the merchants located in the interior. The Board of Trade who were interested in promoting the welfare of their community saw that a benefit would accrue from inspection to their city or town just as it would to the country at large. The Boards of Trade in establishing commodity inspection at interior points carried the consumer's discrimination closer to the producer.





## Chapter 5.

### THE EXTENSION OF COMMODITY INSPECTION TO THE MARKETING OF GRAIN.

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The increased importance of grain in commerce and the realization of the benefits to be derived from grading led to the extension of commodity inspection to the marketing of grain. The inspection of grain was authorized and controlled by a statute differing very little from other commodity inspection acts. The system of inspection used for the first time in the grain trade in 1863 was developed in the marketing of various commodities during the preceeding 70 years. The growth and changes in commodity inspection have been discussed in the preceeding pages. Since grain inspection is the subject of our study it would be well to examine the system as it operated under our first grain act.

One factor promoting the extension of inspection to the marketing of grain was the increased production of grain. Between 1851 and 1890 the cultivation of wheat in Upper Canada, now Ontario, assumed its greatest relative importance. In 1851 Upper Canada produced over twelve million bushels of wheat (1). By 1861 a total

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(1) Census of Canada, 1870-71, v 4, p 195.



yield of 24,620,425 bushels was harvested from 1,386,366 acres (1). The ~~depression~~ wheat acreage was due partly to high prices and partly to a number of circumstances which encouraged immigration, colonization and the settlement of the country. Railway construction, the Crimean war, reciprocity with the United States and the American Civil War all tended to encourage the production of wheat in Canada. Since relatively little wheat is consumed on the farm, increased production resulted in increased marketing of grain. The sale of grain by sample is slow and expensive while sale by certificate is more expeditious and economical. Grading and sale by certificate had been practiced for over 70 years in the marketing of some commodities and the method appealed to the grain merchant. The increase in the quantity of grain handled promoted the adoption of practices lowering the cost of transacting business. Sale by certificate arising out of the practice of grading encouraged the adoption of grading in the marketing of grain.

Another factor promoting the inspection of grain was the desire to take advantage of the benefits to be derived from grading. No period of depression immediately

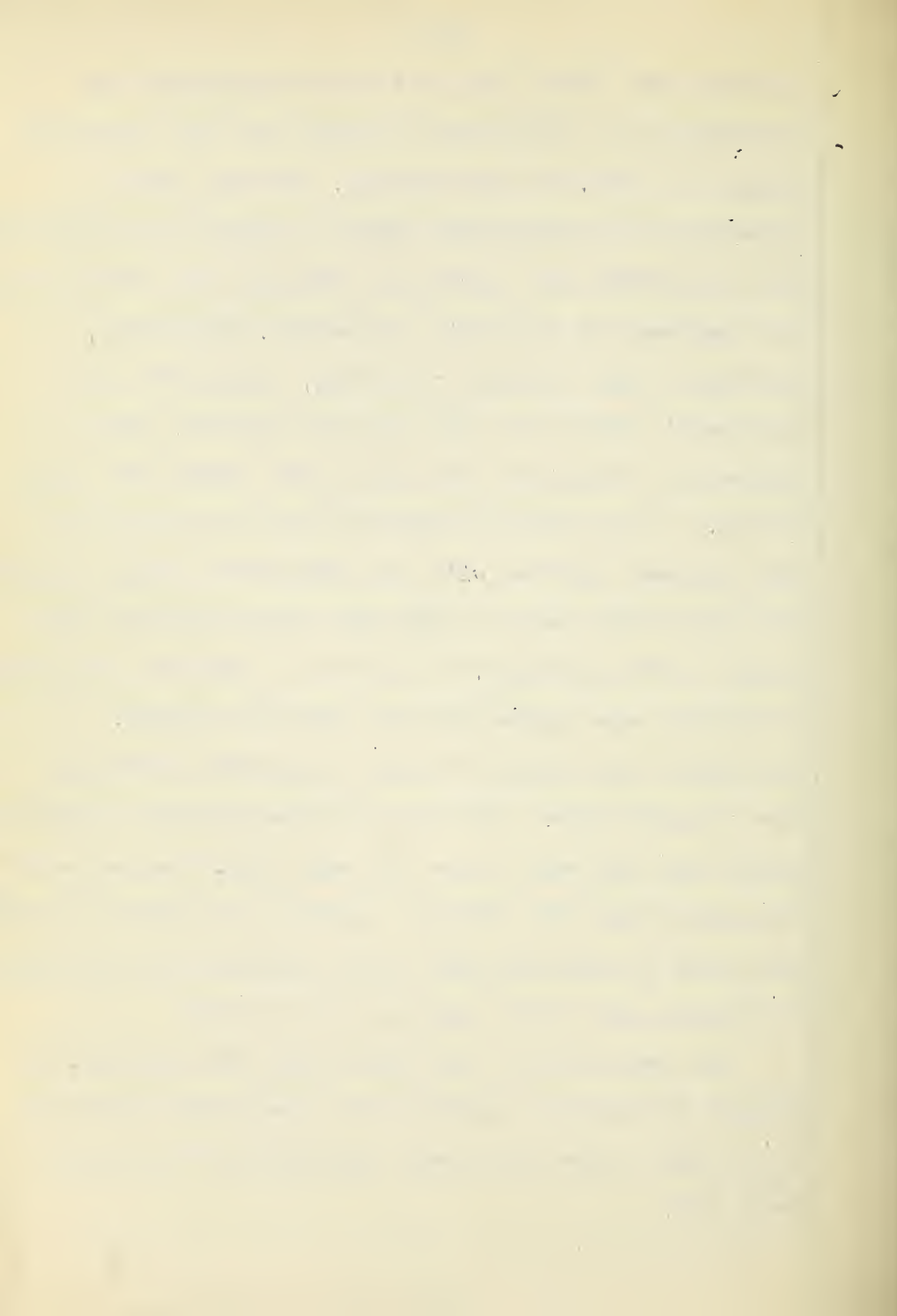
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(1) D.A.MacGibbon, The Canadian Grain Trade, p 16.



preceeded the first grain act as had preceeded the introduction of inspection to Canada and the important changes in 1841. On the contrary, official grain inspection was established during a period of prosperity. Both prosperity and depression influence the introduction and amendment of commodity inspection. Prosperity, favoring a high standard of living, intensifies the consumers' demand for high quality products, while depression intensifies the producers' demand for higher prices. A more exacting discrimination on the part of the consumer together with the competition among dealers for grain would tend to pass that discrimination back closer to the producer. To do this it would be necessary to install some system akin to official grading. Throughout the history of grain inspection instances have occurred where practices received official sanction after they had been in use for some time. The desire of the grain trade for official sanction of practices which developed in marketing was in all probability instrumental in bringing the first grain act into force.

The grain act of 1863 dealt only with grading. No attempt was made to control such non-grading marketing activities as are at present regulated by the Canada Grain Act.



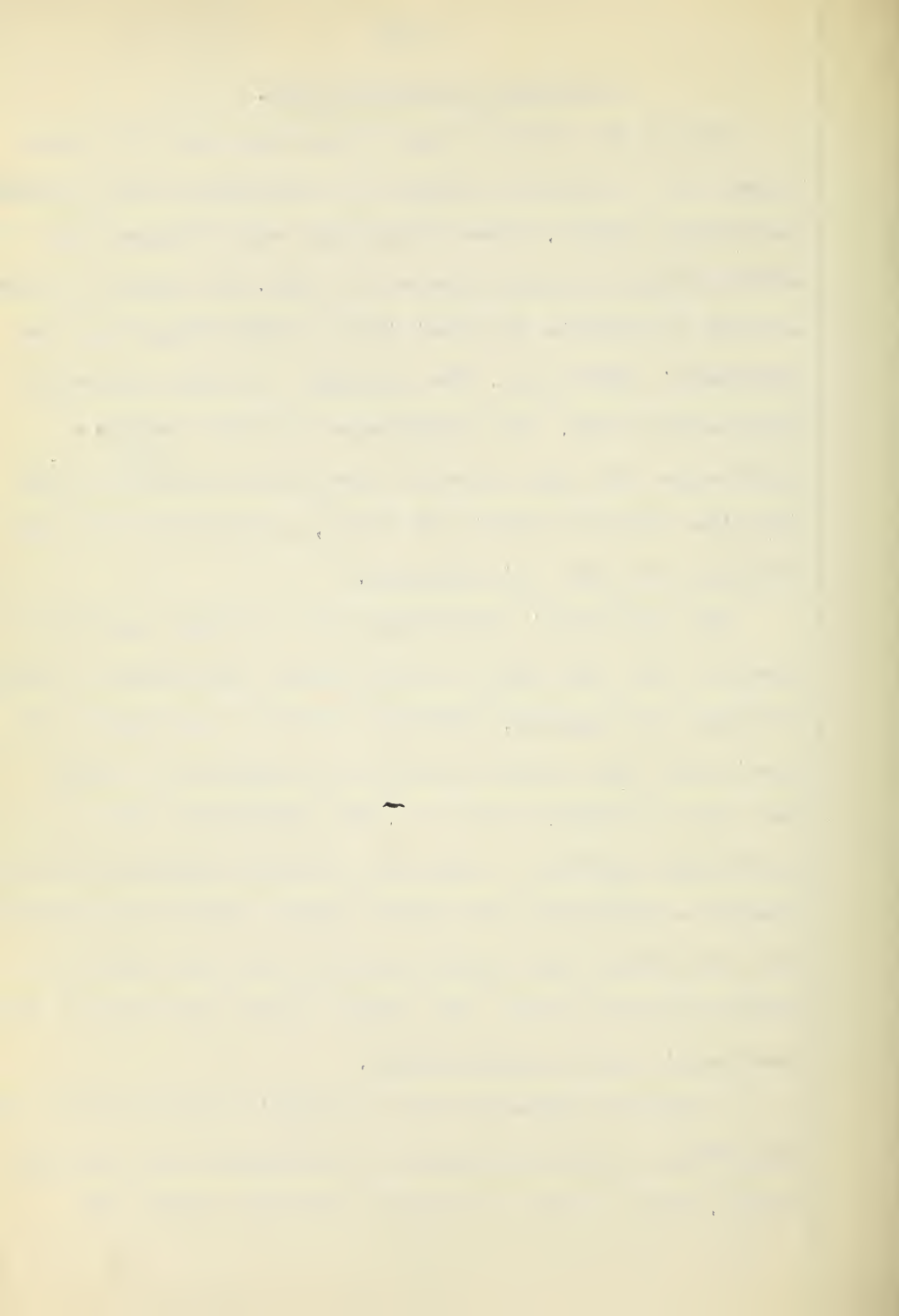


The Wheat Grades of 1863.

During the 70 odd years of grading prior to grain inspection in Canada a number of principles were evolved respecting grades. These principles were observed in establishing the grain grades of 1863. The grades of wheat clearly illustrate the fact that a grade describes the consumers' preference. The consumer of bread desires a light white loaf. This preference in turn creates a preference for that class of wheat which will <sup>mill</sup> and bake into the desired quality of bread, and accounts for the division of wheat into classes.

The consumers' preference for a certain quality of bread is also the basis for dividing a particular class of wheat into grades. Different lots of any variety of wheat will vary in the quality and quantity of bread that can be obtained from it. The preference for a particular quantity or quality of bread secured from wheat creates a preference for wheat having certain properties. To the extent that these properties are the basis of grade classifications, the grades carry and describe the consumers' various preferences.

A greater range of the consumers' discrimination is transferred to the producer if the grades have definite limits. Sharp lines of division between grades are



obtained by the use of definitions and standard samples. The employment of these devices in the grading of grain promotes uniform grading throughout the season and the territory under the jurisdiction of the inspection act. Uniformity of grading lessens the risk to the consumer of loss from fluctuations in grades and results in a higher price paid to the producer for high quality grades and in a lower price paid for low quality. The use of definitions and standard samples in describing grades of grain tends to widen the range of the consumers' discrimination transferred to the producer.

The wheat grades defined in 1863 may be divided into four classes - white winter, red winter, spring and rejected. Some, possibly all, of these classes existed in the marketing of wheat prior to the introduction of official grading (1). In making a study of prices, Michell (2) found the existence of spring and winter classes as early as 1853. Including the two No. 1 springs and rejected, a total of nine grades of wheat were defined (3). The definitions were more simple than those of to-day,

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(1) Commercial grades of wheat were officially established in 1891 but existed unofficially before that date.

(2) Michell, H. Statistics of Prices. Statistical Contributions to Canadian Economic History, v2, p 59.

(3) See appendix 5 for definitions of grades established in 1863.



but much more comprehensive than those of other grains. A weight requirement was included in the definitions of only the spring wheat grades.

The division of wheat into four market classes was based on milling and baking quality. In 1863, as now, the consumer of bread preferred a white loaf. The miller, catering to the consumers' preference, naturally sought those classes and varieties of wheat which he could mill into a flour possessing those qualities necessary for the production of the preferred type of bread. The miller also sought those wheats yielding large quantities of flour. The preference of the consumer for a certain quality of bread created, in turn, a preference of the miller for a certain quality and class of wheat. In exercising his preference the consumer discriminated between different flours. The miller, in turn, discriminated between different wheats. This discrimination was expressed on the market by price. Data on prices for all classes of wheat are not available. Michell gives wheat prices at Toronto for 1863 (1). For that year fall wheat averaged twelve cents a bushel more than spring wheat.

The class of wheat best meeting the market requirements in 1863 was white winter. It had a large

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(1) Michell, p 59. See table # 3 appendix.





percentage of starch, which is whiter than gluten, and a white bran which did not discolor the flour. White winter wheat, in the opinion of millers at that time, yielded a maximum of superfine flour. Red wheat, both winter and spring, was not liked because of the orange tinge it imparted to the flour. It was extremely difficult to make a complete separation of bran from the flour on account of the type of the milling machinery in use. Wheat was ground as finely as possible with the old burr-stone mills and then bolted. The bran was ground up with the flour and, if the bran was other than white, the flour was discolored.

The discrimination against spring wheat was due to its objectionable red color, low quality and milling difficulties. Spring wheat matures later than winter wheat and is subject to greater damage from fall frosts and immaturity. Added to the late maturity of spring wheat was the slow methods of harvesting which lengthened the harvest season and increased the danger of climatic damage to the grain. Light weight is usually <sup>associated</sup> with low quality resulting from adverse climate. Only the spring wheat grades carried weight requirements indicating that the cause of light weight was more common in spring than in winter wheat. Even at this early period spring wheat may have contained a considerable proportion of Fife



wheat so strongly objected to ten years later. The Fife wheats were hard and difficult to mill with the burr-stone mills.

### The Grades of Other Grain.

The act of 1863 defined, in addition to those for wheat, grades for oats, barley, peas, rye and corn. Their definitions (1) were quite simple indicating their relative unimportance on the markets as compared with wheat.

The relative unimportance of other grain on the market was due to the small volume of production and to the small percentage of the crop reaching the central markets where it would be subject to grading. In 1861 the production of wheat exceeded all other grains except oats. Oats and some of the other grains are feed grains and being consumed on the farms do not reach the central market. Statistics are not available giving the quantity of grain inspected in Canada during the early years of inspection. Assuming the uses of grain to-day and 70 years ago are similar, the percentage of production inspected should be similar for the two periods. By using the present percentage of total yield inspected, we may

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(1) See appendix for definitions of grades.



estimate the probable quantity of grain inspected during the early years of grading. This estimate together with the volume of production is as follows;-

Estimate of Production Inspected, 1863.

	Production 1861 (1)	Percentage of crop inspected 1921-1931	Estimated Quantity inspected 1863
Wheat	27,274,779 bu	81.5 %	22,229,000 bu
Oats	38,771,370 "	11.1	4,304,000
Barley	5,103,636	29.8	1,521,000
Rye	1,817,373	61.5	1,117,000
Peas	12,250,173	0.6	74,000
Corn	2,591,151	0.1	3,000

These figures are probably high because inspection was not compulsory, however, they indicate the relative importance of the different grains on the market.

(1) Census, 1870-71, v 4, pp 273-319. Figures for 1863 are not given. The year 1861 is taken as representative of condition in 1863, the year official ~~offi~~ grading was established.





Standard Samples of Grain.

The use of standard samples to describe grades became an established practice before the extension of grading to grain. Standard samples, like many other grading practices, were adopted in our first grain inspection system (1);-

"16. Each Inspector of Grain Shall,,at his own expense, provide sufficient samples of each of the qualities of the different kinds of Grain, of which the standard is hereinbefore fixed; such samples to be approved by the Board of Examiners, and to be renewed as often as may be required by the said Board; and the same shall be deposited with the Secretary of the Board of Trade , and kept by him as standard samples, by which the Inspector shall be governed in establishing the several qualities of Wheat and other Grain."

Standard samples were adopted to make grading more uniform. This was the same objective that led to the use of grade definitions.

It has been pointed out that the nature of the commodity determines the method or methods employed in describing grades and we may enquire at this point why both methods have been used to describe the grades of grain. Grain is extremely variable. Each class of grain has certain properties for which it is desired, and the extent or degree to which it possesses these properties determines the value of the grain for any particular

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(1) Statutes, Province of Canada, 1863, c 3, s 16.



purpose. In the case of wheat, the properties desired by the miller and consumer are freedom from impurities and high milling and baking quality. These properties are affected by a large number of factors. Impurities may be easy or difficult to extract, or may produce different results in the manufactured product. Milling and baking quality is influenced by the variety of wheat, by the condition of the grain when marketed, and by damage from weathering, disease, frost and immaturity. These factors may operate singly or in combination with varying degrees of intensity, and are responsible for such wide variations in quality that scarcely two samples of grain are exactly alike.

One problem faced in defining a set of grades is that of making an equitable division of the factor or factors used as a basis for grading. Where this factor can be expressed quantitatively the problem is comparatively simple, but where the factor or factors cannot be so expressed grade definitions cannot completely describe the grade. The factors now used in defining wheat grades are purity as to variety and foreign matter, weight per bushel, percentage of hard vitreous kernels and soundness. All these factors indicate quality in wheat and all, with the exception of soundness, can be or are expressed quantitatively.



Soundness implies the absence of defects. Some of the defects which affect the soundness of wheat are greenness, frost, immaturity, weathering, sprouts and disease. How, may we ask, is one to measure the damage caused by frost, immaturity or any of the other defects found in wheat? Even though we could measure this damage, we have not solved the problem because soundness is only an indication of quality in wheat. Quality in wheat refers to the milling and baking quality and its most scientific measure is the baking test. Modern business requires a rapid method of grading and forbids the use of the expensive time-consuming baking test as a commercial means of grading wheat. One of the closest approaches to a scientific measure of quality in wheat is the protein test, but it has certain disadvantages which will be discussed in a later chapter. The protein test determines the quantity but not the quality of the protein. Protein quality varies in different varieties and we would still have to rely on the exercise of human judgment to make a varietal determination.

The grades of wheat are not easy to define. During the past 70 years our legislators have made some improvement in grade definitions but grades are still defined in abstract terms. The object of a grading system is to grade the commodity and definitions are but a means





to that end. Our grades are defined, in part, in general terms and if used alone definitions would be inadequate as a sole means of attaining our object. We define grades by statute to maintain an uniformity of grading from year to year. We instruct our inspectors to grade according to the act, but, because the grades are defined in abstract terms, we also supply our inspectors with standard samples so that they will be aided in their work of grading by comparison as well as by interpretation.

When grading, an inspector is faced with the problem of judging quality and unsoundness attributed to various combinations of different factors. To assist him in this work standard samples have long been used. A standard sample exhibits the maximum limit of unsoundness or the minimum limit of quality permitted in the grade of which it is the standard sample. When grading a line sample, an inspector may compare it with the standard sample in determining the proper grade to which the grain belongs. Standard samples are also useful in assisting the inspector to maintain uniformity in his grading from day to day and from month to month.



The Grain Inspection Service of 1863.

The inspection service established under the grain act of 1863 did not differ from that of other commodity inspection acts. The principles underlying this branch of the inspection system might well be reviewed to show how they function in transferring the consumers' discrimination to the grain producer. Grading facilitates the transfer of the consumers' discrimination to the producer, but, unless the grading be properly performed, the producer will not receive the full benefit from it. Accurate grading is promoted by placing certain restrictions on the appointment and qualifications of inspectors.

The close supervision of grain inspection in 1863 by a local authority interested in that service promoted accurate grading and the proper performance of the duties of inspectors. Inspectors were appointed by the Council of the Board of Trade from among those candidates certified as qualified for the position by the board of examiners. The Council of the Board of Trade could remove any inspector and appoint another if it were shown that the duties of the office were not properly performed. Although not an employee of the Board of Trade,



nevertheless, he retained his office by their will and pleasure. Inspectors appointed their own assistants as directed by the Council of the Board of Trade, but it was required that assistants be examined and approved by the board of examiners. Two sureties of \$1500.00 each were required of inspectors.

Both inspectors and their assistants were required to take an oath of office in which they swore not to deal in any way in the commodities which they inspected. This regulation removed the influence of personal gain as an aid in securing impartial judgment on the part of the inspector.

Inspectors were appointed by commission and their remuneration consisted of fees collected for their services. The fees charged for inspection were definitely stated in the earlier commodity inspection acts but fees for inspection under the first grain act were set by the board of examiners. Out of the fees collected, the inspector paid his assistants and maintained his own office. By having his fees set by a third party the inspectors were prevented from overcharging for the sake of greater personal gain or price cutting to increase business. A fixed schedule of fees tended to promote more stable business relations. The fixing of fees by the local board of examiners was a weakness of the act which was





corrected at a later date.

Following the practice established in the inspection acts which preceeded it, the first grain act provided for the creation of a board of examiners. Appointments to this board were made annually by the Council of the Board of Trade, in those cities where such an organization existed and where inspection was authorized. The board of examiners consisted of "five skilful persons" of whom three were to constitute a quorum. Examiners could not be removed from office by the Council which appointed them, however, this would cause little inconvenience as they held office for only one year. Each examiner was required to take an oath of office; he was not remunerated for his services as examiner. The duty of the board of examiners was to examine applicants for the office of inspector or assistant inspector. Those eligible for appointment were recommended to the Council of the Board of Trade. The board of examiners was also charged with making a tariff of inspection fees and with acting as a board of arbitration to,-

"decide all disputes arising between an Inspector and any party employing him, regarding the quality and condition of any wheat or other grain submitted to him for inspection."

The Board of Trade membership included merchants of



various commodities. Those members elected as examiners presumably were grain merchants with a knowledge of how grain inspection should be conducted.

There is little in the act concerning the method of grading. Inspection was not compulsory. Weekly reports were sent to the secretary of the Board of Trade. A clause of the act outlined the method of determining the weight per bushel,-

"the bushel, half bushel, or quarter of a bushel, shall be placed on a flat floor, and filled with a scoop large enough to fill it at one time and shall be struck with a roller  $2\frac{1}{2}$  inches in diameter."

The act is not clear as to who should weigh inspected grain but indicates that this work was performed by the inspector,-

"a bill of inspection shall be furnished... specifying the quantity and quality ascertained by inspection."

The inspector or his assistant gave a bill of inspection for all grain inspected. This "bill" specified the quantity and quality of the grain, the charges thereon, and the name of the store or vessel or number of the car wherein the grain was inspected. A certificate might also be given, when requested, to the shipper,



The Settlement of Disputes.

The methods of settling disputes over grading were those followed in other inspection systems. Where a Board of Trade existed, disputes were settled by the board of examiners acting as a board of arbitration. When a dispute arose between an inspector and the owner of grain, application for an appeal was made to the secretary of the Board of Trade who summoned the board of arbitration to report their opinion on the dispute. Their judgment was final. Where no Board of Trade existed, disputes were settled by a board of arbitration appointed by the Local Justice of the Peace. This latter method was used in 1795 and is fully described in appendix #4. The cost of the appeal was borne by the loser of the appeal.





## Chapter 6.

### CENTRALIZED CONTROL OF GRAIN INSPECTION.

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The stimulus to the development of Canada following the prosperity of the 60's produced two important changes in the Canadian Grain Inspection System, which carried the consumers' discrimination closer to the individual producer. One change concerned the control of inspection which was made possible by the British North America Act. The other change involved the grade definitions in which the consumers' preference became more evident. Centralized control promoted a greater uniformity of both grades and grading than was possible under the control of several provinces.

The British North America Act gave the Parliament of Canada exclusive legislative authority over the regulation of trade and commerce. In 1873 the provincial inspection acts were consolidated in one Dominion statute, the General Inspection Act. Uniform practice throughout an area tends to produce a uniform product or a uniform grade. A uniform grade tends to increase price because the consumer will be relieved of the risk of quality fluctuations. An increased price resulting from a superior



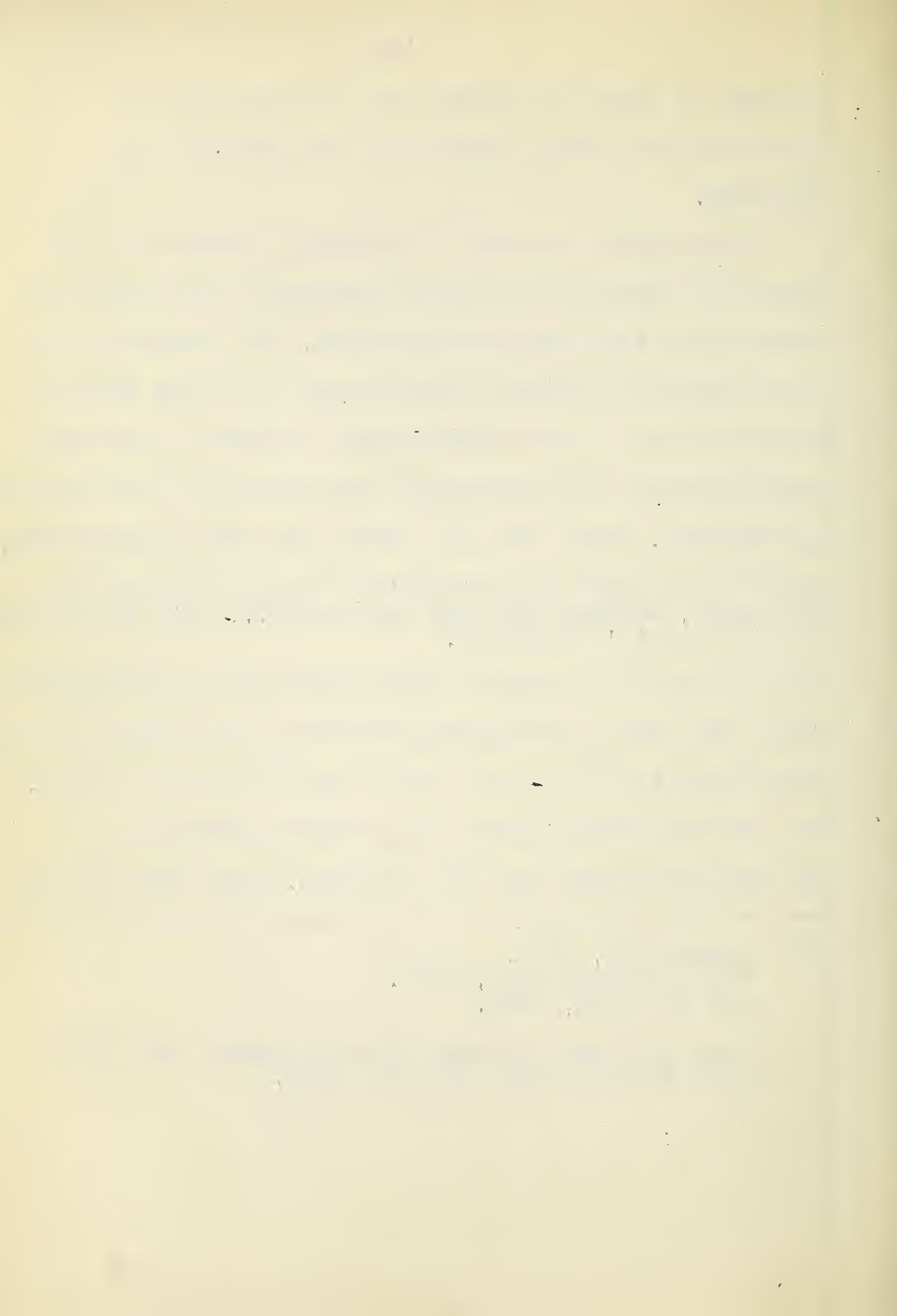
product or grade is evidence of a wider range of discrimination being carried by the grades to the producer.

The uniform practice of grading in Canada is the result of centralized control promoted by the authority invested in the Dominion Parliament. The constitutional acts governing Canadian legislatures up to the time of Confederation did not specifically outline the matters coming within the legislative jurisdiction of the colonial governments. These acts (1) stated that the legislatures, - "shall have power and authority to make ordinances for the peace, welfare and good government... with the consent of his Majesty's governor."

All colonies were free to enact legislation concerning their own trade and commerce with the result that matters controlled by legislation varied from colony to colony. The British North America Act of 1867 united the Canadian provinces into one dominion. Under this act it

- 
- (1) Quebec Act, 1774.  
Constitutional Act, 1791.  
Act of Union, 1841.

The quotation is taken from the Quebec Act and is also found in the other two acts.



was declared (1),-

"that the exclusive Legislative Authority of the Parliament of Canada extends to all Matters coming within the Classes of subjects next hereinafter enumerated: that is to say;-

2. The Regulation of Trade and Commerce.

17. Weights and Measures. "

The above clause was inserted in the act to define the field of legislative authority between the Dominion and provincial governments. Matters concerning the grain trade were thus brought under the jurisdiction of one authority which promoted uniformity to the extent that it was affected by legislation throughout the Dominion.

The extension of autonomy to the Canadian colonies has been slow and gradual, but such extension has been in keeping with the economic and political development of the country. It delayed for a time the introduction of commodity inspection and one method of supervising commodity inspection (2). However, it must be remembered that changes in legislation are usually desired before they are obtained. During the tenure of each of the early constitutional acts, one of the groups of acts related

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(1) British North America Act, 1867, s 91.

(2) Wheat grading and the incorporation of Boards of Trade were refused in 1777.





to commodity inspection made its first appearance. Commodity inspection was introduced during the life of the Quebec Act, the regulation of weights and measures by statute commenced under the Constitutional Act, and the Boards of Trade were first incorporated by a legislature whose powers were obtained from the Act of Union. The policy adopted in 1867 of federal control over certain subjects <sup>in a</sup> resulted ~~greater~~ uniformity of grain inspection throughout the Dominion. This policy has enabled Canada to attain two notable achievements,- a very efficient grain marketing system and the superiority abroad of her certificate final.

Greater Uniformity of Inspection was made possible  
under the General Inspection Acts of 1873 and 1874.

The newly created Dominion of Canada passed her first commodity inspection act in 1873 (1). This act repealed all commodity inspection acts of the different provinces, and placed commodity inspection on a uniform basis throughout the Dominion. Some commodities had been subject to inspection in more than one province, and the sections

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(1) Statutes, Canada, 1873, c 49. "An Act to Amend and Consolidate and extend to the whole of the Dominion of Canada, the Laws respecting the Inspection of Certain



of the 1873 act providing for the inspection of these commodities were consolidations of provincial acts or parts of them. The section of the act concerning grain inspection was taken from a statute of the Province of Canada (1). The Dominion act provided one general form of inspection service for all commodities. Separate sections contained the grade definitions and those special provisions peculiar to the grading of each commodity.

The act of 1873 introduced changes in grain inspection to meet the needs of changing political and economic conditions. Under the authority of the British North America Act the government assumed more direct control over grain inspection. In 1873 the government appointed inspectors, reserved the right to make regulations governing inspectors and to designate and define the districts where inspection was to be practiced. A change in the varieties of wheat grown led to changes in the

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staple articles of Canadian produce". The commodities inspected were: flour and meal, wheat and other grain, beef and pork, potashes and pearl ashes, pickled fish and fish oil, butter, leather and raw hides, and petroleum.

(1) Statutes, Province of Canada, 1863, c 3.



grade definitions. An order in council of July 8, 1873, named the Minister of Inland Revenue to administer the act.

The General Inspection Act of 1873 was repealed after one years operation, but the new act (1), in so far as grain inspection was concerned, differed very little from the old act. The adoption of the Imperial bushel necessitated changes in those grade definitions carrying minimum weight requirements. The regulations governing the board of examiners were changed, and provision was made for the settlement of disputes between inspectors. Between 1874 and 1885 amendments to the act removed the discrimination against Red Fife wheat, designated new inspection districts and provided additional means of examining inspectors.

The change of commodity inspection from a compulsory export basis to one of voluntary market practice required a different means of defining areas subject to an inspector's authority. Commodities for export concentrate in a few central ports and when inspection was introduced inspectors were appointed for those ports or cities.

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(1) Statutes, Canada, 1874, c 45. "An Act to make better provision, extending to the whole Dominion of Canada, respecting the Inspection of Certain Staple Articles of Canadian produce."



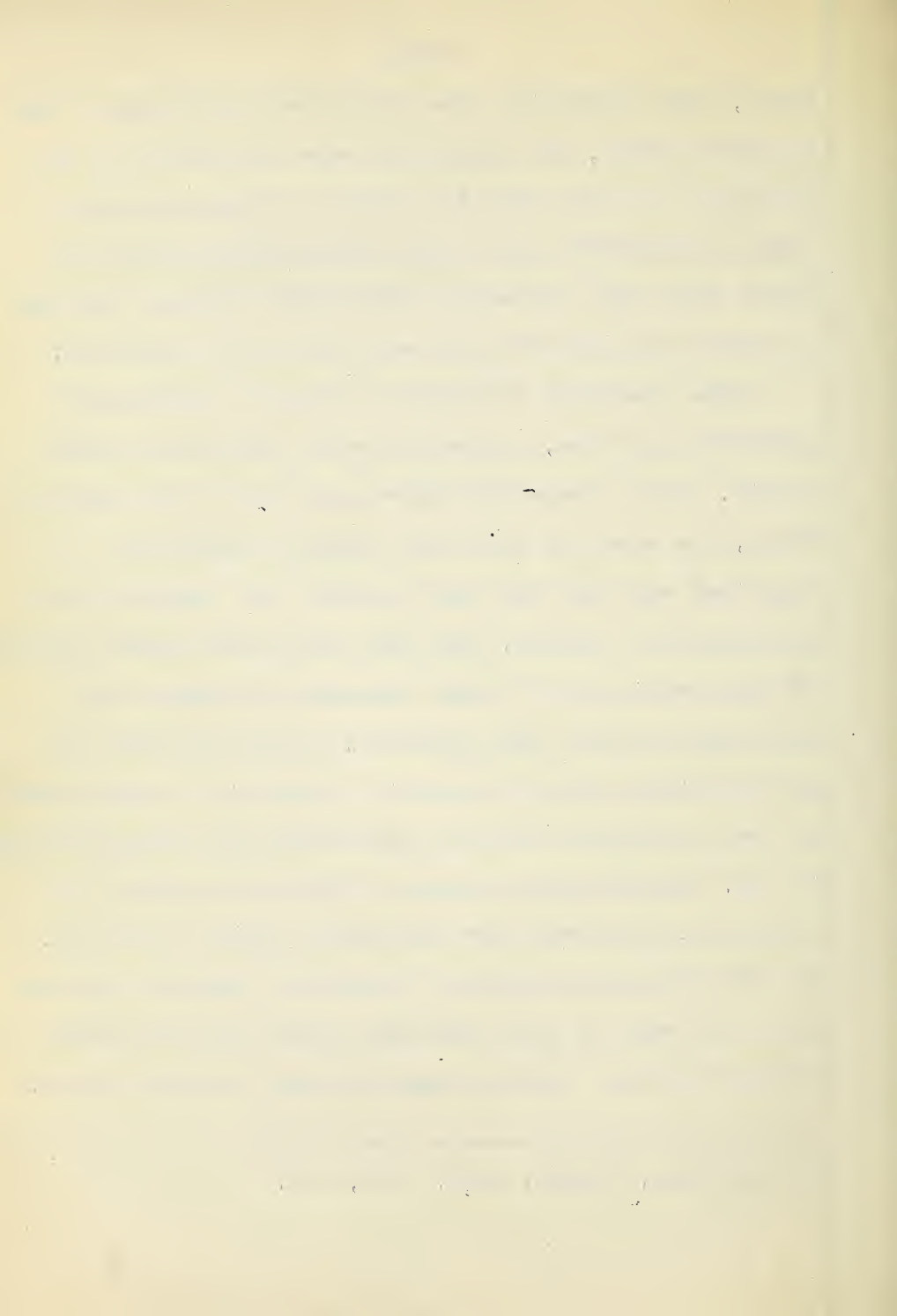


Later, when inspection came under the supervision of the Boards of Trade, the inspectors were appointed for the territory or city where the Board of Trade existed. So long as inspection was in the hands of the Boards of Trade there were inspection districts although they may not have been specifically mentioned in the statutes.

When commodity inspection became an established marketing practice, inspectors were located at inland points. While inspectors were appointed by the Board of Trade, the area for which the Board of Trade was organized was also the area in which the inspector was authorized to inspect. When the inspectors became appointees of the government it became necessary to define the districts in which they operated. The act of 1873 (1) provided that certain inspection districts be designated by the Governor in Council within which the inspector was to act. Following the passing of this act a number of inspection districts were defined by order in council. In 1883 Winipeg was made an inspection district and the Board of Trade at that place was given all the powers hitherto held by similar organizations in other cities.

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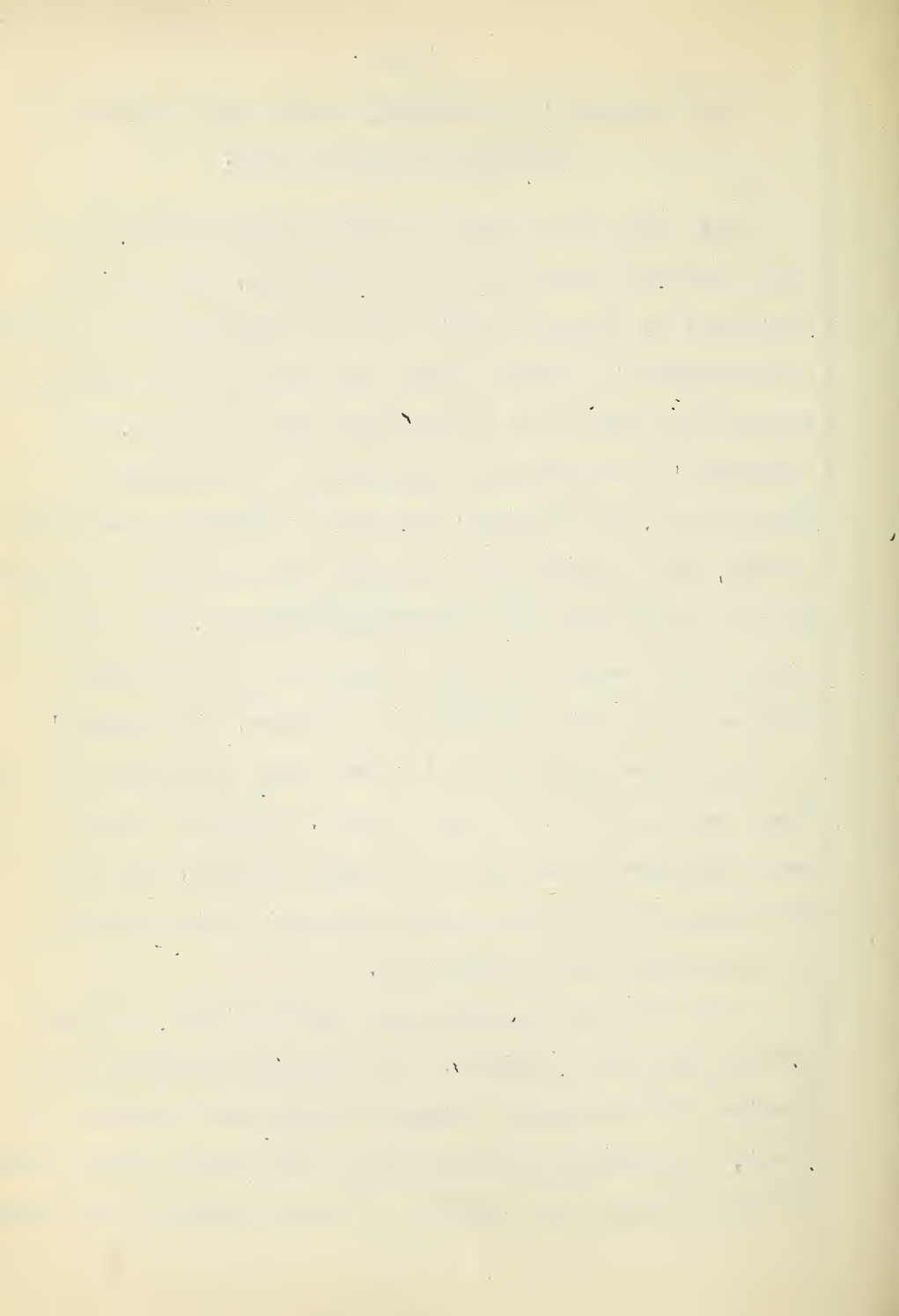
(1) Statutes, Canada, 1873, c 49, s 1.



The Consumers' Preference becomes more evident in  
the Wheat Grades of 1873.

The 1873 definitions of wheat grades record a conflict over varietal discrimination in grading. The consumer continued to prefer a white loaf of bread and his preference was extended to those classes and varieties of wheat which milled and baked into the desired type of bread. The consumers' preference was registered in the grade definitions. The farmers' motive in producing wheat was profit, and he grew those classes and varieties of wheat which yielded him the greatest net returns. The wheats milling and baking into the preferred type of bread were not the most profitable to produce. The farmers' profit motive induced him to grow those varieties of wheat most suitable to his climate. These new wheats were inferior in milling and baking quality, and the discrimination of the consumer was not strong enough to discourage their production.

The 1873 wheat grades were modifications of those defined ten years earlier. The revisions consisted of a greater discrimination between classes and varieties of wheat, a renaming and rewording of the spring wheat grades, and the addition and omission of some clauses to and from



the winter wheat grades (1). These revisions were the reflections of two tendencies intensified during the decade. One tendency was the insisted, possibly increased, preference for a white loaf, and the other was the increased production of inferior milling wheat (2).

The preference for a white loaf has existed for many years. It is believed that this preference had been increasing during the decade of 1863-1873, but the evidence supporting this contention is somewhat indirect. The preference for a white loaf is greatest in those countries having a high standard of living. During periods of prosperity people are better able to satisfy their demand for a higher standard of living. In the decade of 1863-1873 the world experienced an era of prosperity. Since the preference for a white loaf comes from people having a high standard of living, a higher standard of living produced by prosperity will increase or at least maintain the preference for a white loaf. The preference of the consumer for a white loaf is registered in the 1873 grade definitions discriminating between red and white winter wheat and between winter and spring wheat.

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(1) See appendix 6 for grade definitions.

(2) Inferior according to the milling technique of the time.





The most evident factor responsible for the discrimination in wheat varieties is that of wheat production. Coincident with an increased volume was a change in the quality of production. The farmer in pursuit of profit turned to those varieties whose production yielded him the maximum net return. White winter wheat, although commanding the highest price per bushel on the market, was disliked by the farmer because of its low yield and non-resistance to disease. Red winter wheat was preferred by the farmers over white winter, but spring wheat was gradually replacing winter wheat due to the introduction and popularity of a new wheat subsequently named Red Fife.

The history of Red Fife wheat has been told in many texts and bulletins and need not be repeated here except to show its influence on the grading of wheat. Fife wheat was introduced into Canada in 1841 (1). It was hardy, a heavy yielder, and soon became popular with the farmers because it was profitable to produce. By 1870, 60% of the total Ontario wheat crop was spring sown, and the most important variety was Red Fife. Red Fife wheat differed from other varieties in that it was difficult to mill.

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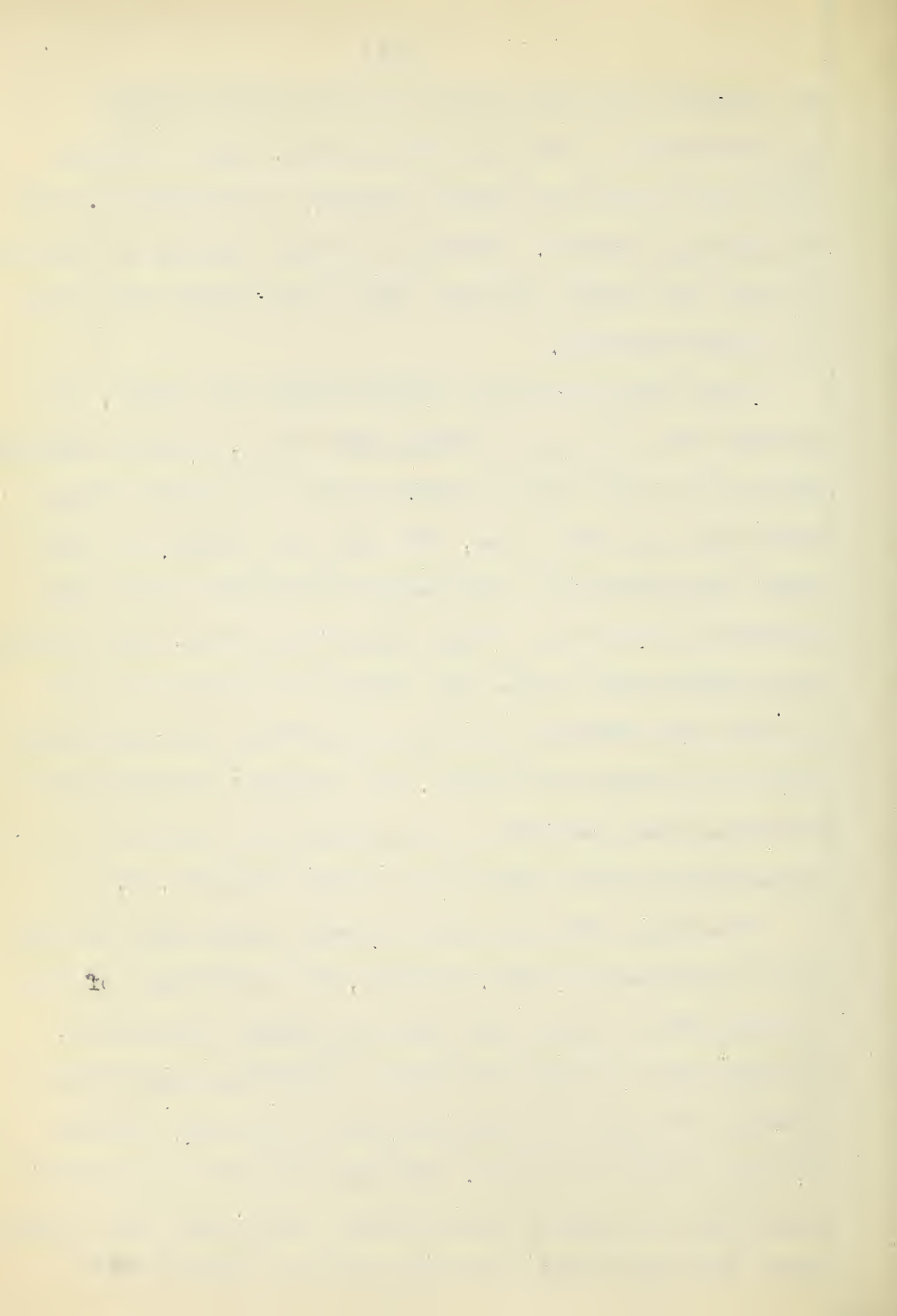
(1) Reginald A.H. Buller, Essays on Wheat, pp 216-217/4



The kernels were very hard and could not be ground satisfactorily in the old stone mills. When it became mixed with wheats of softer texture, it interfered with the milling process. Mixtures of wheat varying in texture produce less flour and more bran in the flour than wheat of uniform texture.

While the production of Fife wheat was small, the millers did not object strenuously to it. A small quantity mixed with other spring wheats could be milled without suffering any great loss, but when the volume of Fife wheat increased they experienced difficulty in milling mixtures containing a large proportion of it. Such mixtures were disfavored because the different portions of the mixture had different milling properties and interfered with the process of milling. The millers' objection to Fife wheat was recorded in the clause of the act preventing it from grading any higher than No. 2.

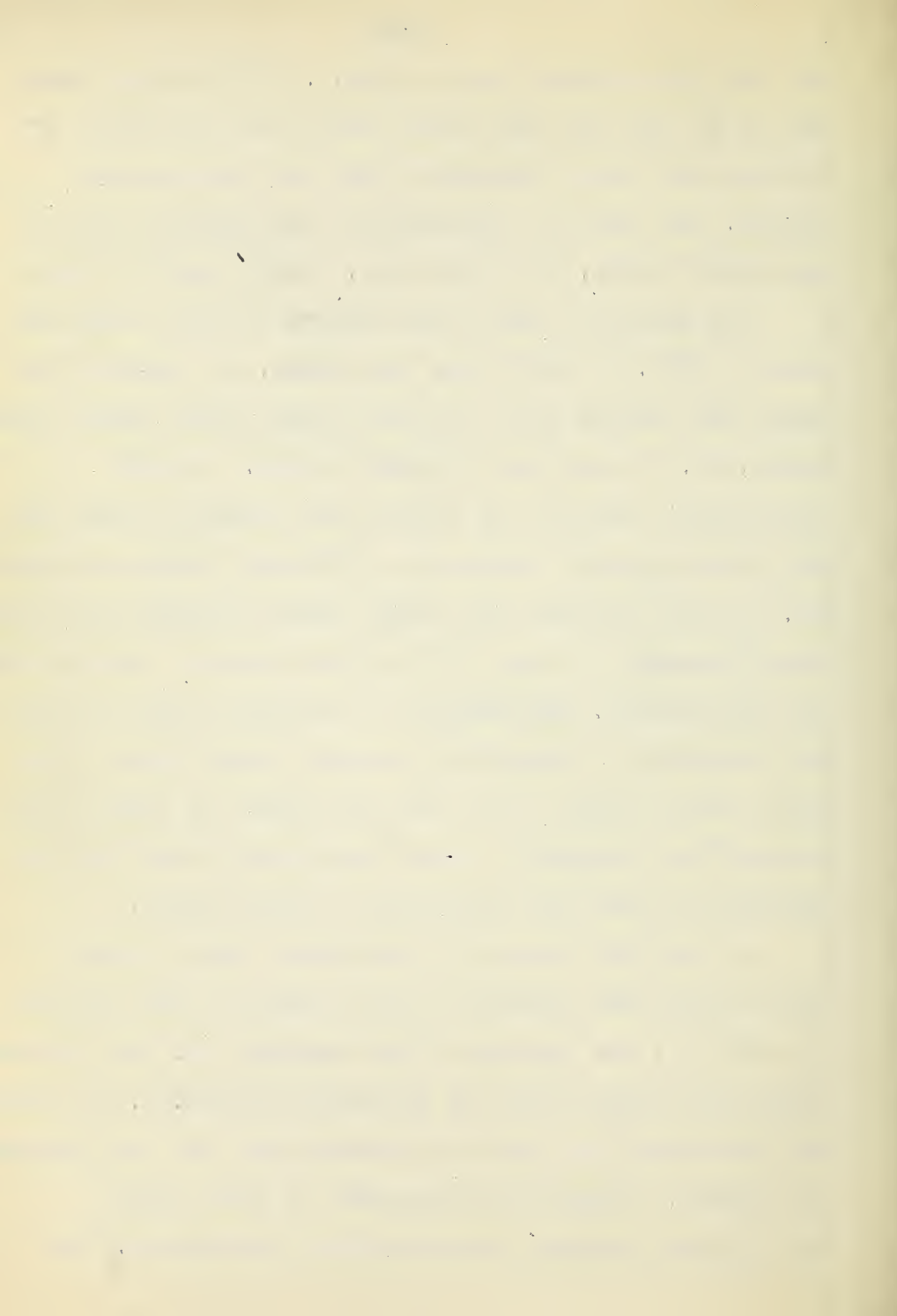
The same three classes of wheat established in 1863 were maintained in 1873. However, the preference of the consumer for a white loaf and the farmers' choice of variety for the most profitable production resulted in greater evidence of discrimination in the act between various classes of wheat. Mixtures of spring and winter wheat were classed as spring wheat indicating that winter wheat did not detract from the value of spring wheat



but that the reverse was not true. . White winter wheat had to be pure but red winter wheat could be made up of either pure red or mixtures of red and white winter wheats. The order of preference as indicated in the act was white winter, red winter and, lastly spring wheat.

Ten grades of wheat were defined in 1873 as against nine in 1863. In redefining the grades, one spring wheat grade was dropped while two new winter wheat grades were added, No. 3 winter and rejected winter. A purity requirement added to the winter wheat grades brought out the discrimination between the different classes of wheat. No. 3 winter narrowed the winter grades formerly existing thus broadening the range of the discrimination transferred to the producer. The addition of rejected winter avoided the necessity of classifying unsound winter wheat along with similar wheat of an inferior class. The terms "well cleaned" or "reasonably clean" were substituted for the expression "free from admixture of other grain".

At the 1874 session of Parliament certain grade definitions were amended (1) as a result of the adoption in 1873 of a new standard of dry measure (2). The Imperial bushel was larger than the Winchester bushel (3). To retain the same weight of grain per bushel under the new standard of measure, changes were necessary in those grade definitions carrying minimum weight requirements. The





changes were as follows;-

No.3	Winter wheat	from 55 to 56 $\frac{1}{2}$	lbs per bushel.
No.2	Spring	" " 56 to 58	" " "
No.3	" "	" 54 to 56 $\frac{1}{2}$	" " "

The changes are not wholly accounted for by the difference between the two bushels.

In spite of the market discrimination against it, Red Fife continued to replace other varieties of wheat. It became extremely popular in western Canada because of its suitability to the climate of that region. In 1883 the government removed the duty on Red Fife used for seed purposes and the Canadian Pacific Railway transported Red Fife seed free of charge. The change in the attitude toward Red Fife was due to two inventions in milling machinery.

The invention of the purifier in 1870 and the rolling mill in 1875 enabled millers to secure the preferred type of flour from wheat formerly considered inferior. Until then, wheat was ground and then bolted, but it was extremely difficult to make a complete separation of bran from flour. The first step in the new process coarsely ground the wheat into flour, middlings

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(1) Statutes, Canada, 1874, c 45.

(2) " " 1873, c 47.

(3) One Imperial bushel equals 1 31/1000 Winchester bushels



and bran. The middlings were run through a purifier, reground and bolted. This process made it possible to produce a higher grade of flour than was possible with the old burr-stones. The Red Fife wheat was benefited most by this new process because it brought out its unsuspected high quality. Mr. E. W. B. Snider of St. Jacobs, Ontario, is credited with the honor of being the first (1875) to make this introduction into Canada if not to all America (1).

Red Fife wheat was better adapted than other wheats to Manitoba and the North West Territories. Large quantities were coming onto the market as a result of the opening up of the west and the demand for hard spring wheat. The grading discrimination against Red Fife from western Canada was removed in 1883 (2) upon the request of representatives from the Winnipeg Board of Trade, the millers, railways and public generally. The removal of the discrimination did not apply to other parts of Canada because it was not requested (3).

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(1) H. H. Manchester, A Pictorial History of Milling. The Northwestern Miller, Feb. 3 1926, p 456.

(2) Statutes, Canada, 1883, c 29.

(3) Hansard, 1883, p 829.



Provisions Respecting Grain Generally.

General provisions governing the grading of grain first appeared in the 1873 act. They were (1):-

"No grain that is warm, or is in a heating condition shall be graded.

In the inspection of Grain, the weight alone shall not determine the grade.

All Inspectors shall make their reasons for grading grain, when necessary, fully known by notation on their books.

All wheat shall be weighed, and the weight per Winchester bushel entered on the Inspection Book."

The second and third clauses of the above quotation have been carried unchanged through the various grain inspection acts up to the present time. The fourth clause was changed in 1874 to conform to the change in the standard measure of capacity. From 1874 to the present this clause remained unchanged. Grain affected by the first clause was graded "condemned" after 1885.

A Decrease of Local Influence on Grain Inspection.

To further the government's policy of centralized control, a few changes in the inspection service were introduced by the act of 1873. Inspectors were appointed by the government in place of the Board of Trade, but





they were examined by a board of examiners appointed either by the Board of Trade or the government if no Board of Trade existed. In place of a recommendation, candidates for the position of inspector received a "certificate of qualification" upon successfully completing an examination by the examiners. The government could also "appoint as an inspector under this act, without a new examination, any person who has been an inspector of the same article under any act hereby repealed". The government also reserved the authority of requesting, when necessary, the inspectors to appoint deputies. These changes were necessary to bring the inspection service more directly under government control.

The act of 1763 stated that " The Board of Examiners ... shall make a Tariff of the Inspectors' fees for the several services which may be required of them, and may from time to time, as circumstances may require, re-model and alter such Tariff,-". The inspector was interested in the total fees collected because it was from such fees that he was remunerated for his services. The Board of Trade was also anxious to have as much grain as possible brought to their city or town. Both these factors would exert some influence on the tariff and may also have resulted in differences in grading between two points.



Inspection fees were again, the first time for grain, stated in the act of 1873, but fees for "re-examination and all services connected therewith" continued to be set by the Council of the Board of Trade or if there be none by the Governor-in-Council (1). When the Boards of Trade "at any place for which a grain inspector is appointed" were authorized to license weighers they were also instructed to "establish a tariff of fees to be paid them".

To <sup>ensure</sup> impartial judgment, examiners were not permitted to accept any form of remuneration for their services as examiners. While such a provision promoted impartial judgment, it did not offer any inducement for the examiners to take the trouble to examine candidates. This situation resulted in an amendment in 1884 (2) which authorized the government to appoint as inspectors any person who has qualified under some other Board of Trade. Inspectors were permitted to examine their assistants in case the board of examiners failed to do so.

The General Inspection Acts of 1873 and 1874 continued to provide for the formation of boards of examiners in a manner similar to that outlined in the act of 1863. In those inspection districts where no

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(1) Statutes, Canada, 1873, c 49, s 12.

(2) Statutes, Canada, 1884, c 33, s 1.



Board of Trade existed, the appointment of the board of examiners was made by the government, but, where a Board of Trade was incorporated, appointments continued to be made by the latter body. Several changes were made in the duties of the board of examiners. The new board consisted of three examiners. In place of recommending successful candidates to the Council of the Board of Trade, each successful candidate was given a certificate of examination. This change was necessitated by the change in the method of appointing inspectors who were required to have a "certificate of qualification from the proper board of examiners". Another change relieved the examiners from the duty of drawing up a tariff of inspector's fees by incorporating such tariff in the act.

The following year the membership of the board of examiners was increased to five of whom three were a quorum. In special cases the Board of Trade was permitted to name additional examiners to make up a quorum. At the same time examiners were permitted, for the first time, to collect a fee for the examination of a candidate for the position of inspector or deputy. This change was necessary to induce them to act as examiners.

The acts of 1873 and 1874 are not clear regarding the settlement of disputes. Where a Board of Trade existed,





the board of examiners acted as a board of arbitration, but the wording of the act indicates that this practice applied only to disputes arising from the grading of flour and meal:- (1)

"Provided always that if any dispute arises between the Inspector of deputy Inspector for any of the said cities of..., and the proprietor or possessor of flour or meal, with regard to the quality or condition thereof..."

From the discussion of the House in connection with amendments to the Inspection Act in 1885 (2), it would appear that the board of examiners settled disputes over the grading of grain as well as of flour. Where no Board of Trade existed, disputes over grading were settled by a board of arbitration appointed by the local Justice of the Peace.

The possibility of disputes between inspectors was clearly foreseen and legislation was enacted to meet the situation. In 1874, provision was made for differences arising (3),-

"between inspectors as to the true quality of grade of any article inspected by any one of them and re-inspected by another; such differences shall be definitely determined by reference to such board of

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(1) Statutes, Canada, 1873.

(2) Hansard, 1885, p 1318.

(3) Statutes, Canada, 1874, c 45.



"arbitration or other authority as the Governor-in-Council may appoint for that purpose."

No orders-in-council were passed creating a board of arbitration to settle the above type of dispute except in the case of disputes arising from the grading of flour (1).

Miscellaneous Acts affecting Grain Inspection.

The influence of changes in several acts, not directly associated with grain inspection, extended to the inspection of grain. These acts are the Weights and Measures Act and the Board of Trade Act. The Weights and Measures Act of 1873 adopted the Imperial bushel in place of the Winchester bushel. The changes this act made in grain inspection have been considered in the discussion on grade definitions.

Until 1874 Boards of Trade were incorporated by special statute, but the applications for the formation of these organizations became so numerous that it was decided to provide for their incorporation under one uniform statute, the Board of Trade Act (2). The formation of these organizations is described in the act as follows:-

"1. Any number of persons not less than 30, being merchants, traders, brokers, mechanics, manufacturers,

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(1) Order-in-Council, Oct.9, 1879.

(2) Statutes, Canada, 1874, c 51.



"managers of banks, or insurance agents, and being residents of any village, town or city having a population of not less than 2500, may associate themselves together as a Board of Trade, with all the privileges and powers conferred by, and subject to all the restrictions of this act."

The above section was repealed in 1876 (1), and a new section substituted authorizing the formation of a Board of Trade in a county or district in addition to a village, town or city. A district was defined as one "established for judicial purposes by the Legislature of the Province wherein the same is situate". This amendment opened the door to commodity inspection in sparsely populated areas.

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(1) Statutes, Canada, 1876, c 34, s 1.





## Chapter 7

### THE GROWTH OF GRAIN INSPECTION TO NATIONAL IMPORTANCE

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The supervision of grain inspection by local Boards of trade failed to obtain the maximum benefit from inspection when that service assumed national importance. Since the inception of grain inspection in 1863, grain production had increased enormously. The greatest impetus to increased production was the opening up of the west. Settlers poured into the prairie provinces soon after the linkage of eastern and western Canada by an all-Canadian transcontinental railway. The invention of the purifier and the rolling mill brought out the intrinsic value of the Fife wheats. These wheats were well adapted to the climatic conditions of the prairies. There grew up a strong demand for hard spring wheat, and, as a consequence, the production of wheat in western Canada rapidly expanded. With two large areas producing wheats of different qualities, adjustments were necessary in the inspection system. The Boards of Trade, who supervised inspection, were local organizations with a local outlook. To achieve the maximum service from grain inspection over a wide area, it is necessary that its supervisors or administrators should have a wide or national policy. This was not possible with the local Boards of Trade. From 1885 until



the close of the century, the limitations of local supervision became apparent. Although the administration of grain inspection was not centralized until 1899, several changes in the dying years of the century alleviated some of the weaknesses of local supervision.

The General Inspection Act of 1885 introduced changes attempting to overcome the weakness of local supervision. A standards board was created to select uniform standard samples for the whole of the Dominion. Four years later, a second standards board was set up to select the standard samples for western grain. The act of 1885 provided for the appointment of a chief inspector, and a few changes were made in the regulations governing inspectors and examiners. The grades of wheat were completely revised. A number of grades were defined for grain grown in western Canada. Commercial grades were officially introduced in 1891. These changes tended to widen the range of the consumers' discrimination carried by the grades to the producer.

During the early colonial period, inspection was designed to protect foreign trade by preventing the exportation<sup>of</sup> low quality or unmerchantable products. Inspection was compulsory. Later, when emphasis was placed on the improvement of quality, inspection was made voluntary. It was argued that the premium for high quality



would induce the owner to have his product inspected. This attitude is brought out by the discussion in the House on this point:

"With regard to voluntary inspection, when an article is inspected compulsorily, the inspection largely loses its value. Unless it is optional with the parties to have their property inspected, and unless that inspection is worth something, there is no object in having it inspected. If the inspected article, by reason of the standard established, is made more valuable to the public, therein lies the value of inspection". (1)

In addition to those found in the Inspection Act, changes were also made in other acts affecting grain inspection. In 1886 (2) an amendment to the Board of Trade Act required that those eligible to associate as members of a Board of Trade to be residents of a district. A district was defined as, "a city, county, town, village, or judicial district within and for which the board is established under this act". An amendment in 1894 (3) extended the definition of "district" to include a Legislative Assembly electoral district of the North West Territories. These amendments provided for the formation of Boards of Trade authorized to administer inspection in areas previously denied the right to organize, and was especially beneficial to western Canada.

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(1) Hansard, p 1309. 1885. Mr Dundas.

(2) Statutes, Canada, R.S. 1886, c 130.

(3) Statutes, Canada, 1894, c 23.





The consumers' Preference promotes the Classification  
of Wheat by Variety and District

Although the 1883 amendment lessened the dissatisfaction with the grades established in 1874, it did not remove the objection, growing stronger every year, of one set of grades for all the wheat grown in Canada. Representations from Boards of Trade, grain dealers, and others interested in grain were instrumental in bringing about a further amendment to the grade definitions in 1885 (1) This amendment greatly increased the number of classes and grades of wheat. Grades were defined for five classes of spring wheat: Manitoba Hard and Northern Spring for wheat grown in western Canada; Spring wheat and Canada Hard wheat, a new class for the Fife wheats, applied to eastern Canada; and the fifth class, Goose wheat, was provided for soft wheat grown anywhere in Canada.

A very high standard was set in defining the grades for Manitoba hard wheat. The definitions used in Minnesota were consulted in defining the Manitoba grades, but the standard set for Manitoba wheat was much higher than anywhere else on the continent. Manitoba wheat was of a very high quality, and, by setting very high standards, it was hoped that a premium would be paid for such quality.

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(1) Statutes, Canada, 1885, c 66. See appendix # 7.



Extra Manitoba Hard wheat was a grade consisting of 100% pure Red Fife wheat. The other two grades in the class contained at least 85% of Red Fife. The three Northern Spring wheat grades were lower in quality, consisting of 50% of Red Fife. The Canada Hard wheat class was for the Fife wheat grown in Ontario, Although the volume of this class of wheat was not great, it was felt that the grading of such wheat should be provided for.

The principle changes in the winter wheat grades were the addition of an "extra white winter", and of two mixed winter grades. Two grading terms were described in the act for the first time; "no grade" for damp grain, and "condemned" for grain badly hin burnt or badly mixed with foreign grain or seeds (1).

The 1885 grade definitions were a considerable improvement over those of 1873. In many cases the quality standard was considerably higher, and individual grades were more fully described. Practically all definitions had a minimum weight requirement, and those provided for western grain also had a varietal requirement. Omitting "no grade" and "condemned", the total number of statutory grades was increased from 10 in 1873 to 24 in 1885. The increase was obtained by creating new classes of wheat

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(1) See appendix # 7 for grade definitions.



rather than increasing the number of grades in each class. Each class of wheat had certain distinctive characteristics, and, by keeping each class separate, the various consumers were permitted to satisfy their preference for wheat possessing specific properties. The discrimination of the consumer for wheat of certain qualities was facilitated by creating new wheat classes.

Up to 1885 grades of grain had been defined and changed only by statute, but, in that year, a departure was made from the practice previously followed by giving the Governor-in-Council authority to modify grade definitions:

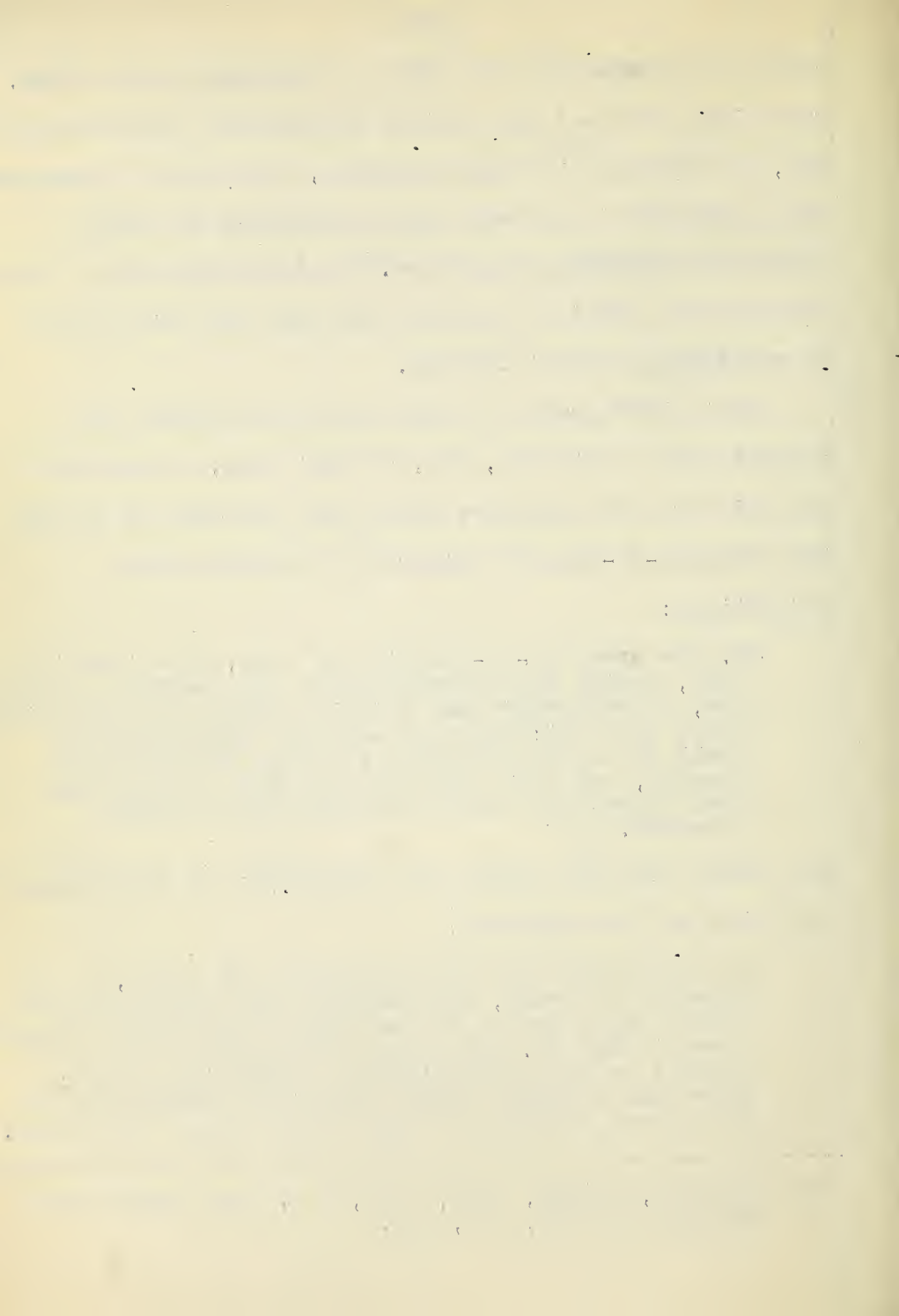
"2. The Governor-in-Council may also, from time to time, modify the classification hereinafter provided for, in respect to any article subject to inspection under this act; and such modified classification shall be in four successive issues of the Canada Gazette, and upon completion of such publication shall have like force and effect as if herein enacted". (1)

The reason for this change was brought<sup>out</sup> by the discussion in the House on the amendment:

"It is possible that the necessity may arise, in the interest of trade, for modifying the classification without waiting for the meeting of Parliament to get power to do so. Last year a difficulty arose with respect to the classification of Manitoba wheat; there was no power under the Act to classify it or to fix the standard as high as the wheat would bear,

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(1) Statutes, Canada, 1885, c 66, s 2. This section was repealed in 1899, c 5, s 2.





"and consequently injustice was done to the trade of Manitoba. I (Mr. McLellan) think it is desirable in the interest of the producer, that this power should be given to the Governor-in-Council." (1)

The first modification of grades by the Governor-in-Council came in 1888 (2). The changes consisted of the addition of a No. 1 hard white Fife grade for western Canada, the omission of the two Canada hard wheat grades for Fife wheats grown in Ontario, and the omission of No. 3 Northern spring. The percentage of Red Fife required in the three Manitoba hard wheat grades was lowered. The Northern Spring grades were changed in name to Manitoba Northern. The remaining spring and winter wheat grades remained unchanged.

In 1895 the grade "Extra Manitoba Hard" was discontinued, and No. 1 Manitoba Hard was redefined with a higher standard of quality which placed it between the former "Extra" and "No.1" (3). The following year the standard of quality was raised in the grades of No.'s 1 and 2 Manitoba Hard (4). On October 20, 1897, an order-in-council added the "Extra Manitoba Hard" grade as it was defined in 1888.

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(1) Hansard, 1885, p 2550.

(2) Order-in-council, Aug. 9, 1888. See appendix # 8.

(3) Order-in-council, Oct. 14, 1895, See appendix # 9.

(4) Order-in-council, Sept. 26, 1896. See appendix # 10.



Other Grain

Changes in the grades of other grain appeared only in barley and peas. In both cases the number of grades was increased which increased the range of the consumers' discrimination transferred to the producer. No. 2 barley was divided into two new grades, No. 2, and No. 3 Extra; while No. 3 barley was split into No.'s 3 and 4. Minimum weight requirements were added in the lower grades. The number of grades of peas was increased by placing a No. 3 between No. 2 and Rejected.

Commercial grades

The grades defined for grain from western Canada were set at a very high standard. This action was taken at the request of the west and was found satisfactory in most years, because the grain generally was of a very high quality. In certain years, however, western grain was of low quality due to some unusual climatic condition. It was found that in such years the bulk of the crop did not fall into those grades defined by statute. One way out of the difficulty was to lower the grade definitions, but the trade was already experiencing unfavorable results from such a practice. It was felt in the House of Commons (1) that the high standard of quality as defined in the statute

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(1) Hansard, 1891, p 4299.



should remain constant, and that additional grades called commercial grades should be provided in case the quality of the crop fell below average. With this object in view, the government amended the General Inspection Act as follows (1) :

"If any considerable portion of the crop of any one year has any marked characteristics which exclude it, to the prejudice of the producer, from the grade to which it would otherwise belong, the examiners (2) may establish a special grade and choose a sample of such grade to be the standard therefor; and in such case they shall distribute samples of such standard to the several inspectors for their guidance, and the package containing the sample so distributed and the certificate given by the inspectors in relation to such grades of grain shall be marked 'commercial grade'. The Governor-in-council may reject the standards in this section mentioned if he deems them to be unfairly or improperly chosen, and he shall forthwith cause others to be chosen in their place by such manner as he directs".

This amendment legalized a practice which had grown up in the grain trade. In the debates reported by Hansard reference is made to the grades of "No. 1 Hard Commercial", "No. 1 Hard Frosted", and etc. No such grades were defined by statute and the grades and the certificates covering them were illegal.

The creation of commercial grades increased the number of grades into which wheat of a particular class could fall. It also avoided fluctuations in the quality

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(1) Statutes, Canada, 1891, c 48, s 1.

(2) Examiners refers to the representatives of the board of examiners serving on the standards board.

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of a grade from year to year when only a limited number of grades were available. The addition of commercial to statutory grades permitted a wider range of the consumers' discrimination to be transferred by the grades to the producer. It also lowered the risk of fluctuation in the quality of grades incident to the frequent adjustment of grade definitions to the quality of the crop. Commercial grades, therefore, facilitated the transfer of the consumers' discrimination to the producer.

#### Changes in the Inspection Service bring greater Uniformity of Grading

The appointment of a chief inspector was first provided for in 1885 by an amendment to the General Inspection Act (1). Although grain was only one of the commodities for which a chief inspector was appointed, the discussion in the House centered around grain inspection (2). It was hoped that this official would help to unify grading throughout the country, but, as his territory was large, and as he was remunerated from fees only, it was impossible for him to keep in close touch with all parts of the country. The chief inspector was empowered to arbitrate disputes between inspectors over grading, and

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(1) Statutes, Canada, 1885, c cc, s 1.

(2) Hansard, 1885, p 1309.



also to act as a third means of settling disputes between inspectors and the public.

A few changes occurred in the regulations governing inspectors. In 1894 it was found that inspectors at Montreal and Port Arthur, due to the large crop exported, made a very good thing out of grain inspection (1). To prevent such large "salaries", an amendment was passed in 1895 (2) empowering the Governor-in-Council "(a) to reduce and amend the tariff of inspection fees, and (b) to apportion the fees between inspectors and the government". For the purpose of verifying the statement made by a grain inspector of the quantity of grain inspected by him at any elevator, "the books kept in connection with such elevator shall at all times be open to inspection by any duly authorized officer of the Department of Inland Revenue".

The boards of examiners were instructed in 1885 to send delegates to form a standards board for the purpose of selecting uniform standard samples. In 1895 (3) the examiners were permitted to collect fees for their services as examiners. This departure from a policy

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(1) Hansard,

(2) Statutes, Canada, 1895, c 24.

(3) Statutes, Canada, 1895, c 24.



adopted in 1818 promoted the attendance of examiners at examinations.

An additional method of settling disputes was provided for in the 1885 amendment, "The chief inspector, when such disputes were referred to him whether they be between Inspectors or between Inspectors and the public", was empowered to act in the same capacity as the board of arbitration appointed by a Justice of the Peace or the Board of Trade. In the same year the board of examiners, acting as a board of arbitration, were permitted to name additional examiners for the occasion in the absence of a sufficient number. The choice of any of the above methods of settling disputes was optional.

#### The Grain Standards Board.

The selection of standard samples, originally the work of individual inspectors, was transferred to a standards board to promote greater uniformity of grading. From 1863 until 1885 the inspector selected the standard samples of grain for his inspection point. Due to the human element in interpreting abstract grade definitions, standard samples "made up" by individual inspectors varied at different inspection points. Since the standard samples are employed to assist inspectors in grading, differences in the composition of standard samples result





in differences in grading. The lack of uniformity in grading narrows the range of the consumers' discrimination transferred by the grades to the individual producer, and restricts the realization of the benefits from grading. The variation in grading resulting from the use of different standard samples was corrected in 1885 by the creation of a standards board to select one uniform set of samples for the area coming under the jurisdiction of the act.

Standard samples assist the inspector to make sharper divisions between the various grades, but the use of standard samples varying in quality at different points nullifies their original objective. The selection of a standard sample to exhibit physically a written description of a grade is a matter of judgment, and individuals differ in the selection of a sample to conform to their interpretation of the definition. Differences in standard samples produce differences in grading; because, if the inspector uses standard samples to assist him in grading, and if those samples differ, grading tends to differ between inspectors or points using different standard samples. With an increase in the number of inspection points in the grain growing areas of Ontario, the weakness of the individual selection of standard samples became more apparent.



The grain standards board, first created in 1885 (1), was composed of delegates, not over three, from the boards of examiners of cities where grain was inspected. The meetings of the standards board were called by the Council of the Toronto Board of Trade, and were held between August 15th and October 1st of each year. Representatives from three inspection points were required to make a quorum. If the standards board failed to assemble or to select standard samples, the Governor -in-Council was authorized to select standard samples by some other means.

Differences in interpreting grade definitions led to the formation of two standards boards, one for eastern and one for western Canada. The act of 1885, creating the first standards board, also defined grades for eastern and western Canada. This standards board selected the standard samples for all the grades, but those selected for western grain were not satisfactory to the people of the prairies. Although represented on the standards board, western Canada was permitted to send so few delegates that it was powerless to secure the quality

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(1) The standards board did not originate in the grain inspection system. The General Inspection Act of 1873 created a flour standards board. The Consolidated Statutes of Canada, 1859, contain several revised inspection acts which may provide for a standards board. This volume is not available in Edmonton.



of standard samples desired. In 1889 representations to the Dominion government obtained an amendment to the act providing a separate standards board for western grades. The argument advanced was that, since Manitoba grades applied only to western grain, it was only fair that the standard samples for those grades should be selected by those most interested in the grades, namely, the people of the west. The amendment was as follows; (1)

"3. The standards for grain grown west of Port Arthur shall be chosen by a board of persons not exceeding eleven in number annually appointed by the Governor-in-Council, five of whom shall be a quorum; such board shall be selected from the Boards of examiners of applicants for the office of inspector of wheat and other grain and from duly appointed grain inspectors, - which examiners and inspectors are resident at Port Arthur or west thereof;..."

The standards board for eastern Canada was made up as before except that western cities were not represented, and the maximum number of delegates from each city was reduced from three to two. The difference in the organization of the two boards was due to the small number of Boards of Trade authorized in the west to supervise grain inspection. The Eastern standards board continued to be appointed by the Boards of Trade.

The principle established in 1885 of one uniform set of standard samples for the whole Dominion was not

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(1) Statutes, Canada, 1889, c 16, s 3.





violated by the 1889 amendment. Each board only selected the standard samples for those grades of grain defined for their respective areas.

In 1891 the standards boards were instructed (1) to "establish a special grade, and choose a sample of such grade to be the standard therefor". These "special grades" known as commercial grades are not defined by statute. Definitions do accompany commercial grades, but they are fundamentally different from those of the statutory grades. Definitions of commercial grades supplement the standard sample while statutory grades are first defined and the sample selected to supplement the definition.

After the grading of different inspectors had been made more uniform by the use of uniform standard samples, variation in grading from year to year became evident. which the commercially administered standards board failed to correct. The quality of a grain crop varies from year to year depending on the character of the season. Between 1888 and 1899 the grain trade attempted to adjust the grades to the quality of the crop. Grade definitions were frequently changed by order-in-council and the composition of standard samples fluctuated annually. To avoid loss from fluctuations in grades, the foreign

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(1) Statutes, Canada, 1891, c 48, s 1.



buyer lowered his price and shifted the risk to the producer. To remove this risk and to facilitate the transfer of the consumers' discrimination to the producer, the inspection act was amended to provide greater control over the work of the standards board. In 1892 an amendment authorized the government to reject the standard samples selected by the standards board, and to appoint the members of both standards boards (1). The personnel of the standards board appointed by the Boards of Trade was subject to frequent change. The board of examiners from which the members of the standards board were selected held office for one year only. By making appointments to the standards board more permanent, it was hoped to stop the tendency to gradually lower the quality of the standard samples. Variation in grading from year to year continued, however, and was not remedied until the government assumed the responsibility for administering the inspection service.

#### The Weighing of Grain

The Inspection Act of 1863 required the inspector to give a "bill of inspection" specifying the quantity and quality of the grain he inspected. Evidently the inspector was responsible for weighing. In 1865 (2) an act was passed

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(1) Statutes, Canada, 1892, c 23

(2) Statutes, Canada, 1865, c 6.



giving certain Boards of Trade power to appoint a board of examiners to examine candidates for the position of weighers or assistant weighers. This act does not appear to have been used for regulating the weighing of grain.

Until 1887 there was no system of controlling weighing in grain elevators. In England weighers were licensed and sworn, and, when a dispute arose as to the weight of a shipment of grain, the law operated in favor of the English buyers who held a certificate of weight from a sworn and licensed weigher.

To overcome the tendency to dispute over weights of grain, an act was passed (1) conferring on Boards of Trade authority to license weighers. The Board of Trade was empowered to pass a by-law requiring all weighers employed in grain elevators in the district to be licensed. The Board, upon being satisfied as to the fitness of the applicant, was authorized to issue him a license. An amendment in 1891 (2) provided that weighers be appointed by the government upon recommendation of the Board of Trade, and that inspectors or their assistants, upon recommendation of the Board of Trade, would be eligible for that position.

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(1) Statutes, Canada, 1887, c 37.

(2) Statutes, Canada, 1891, c 47.





An order-in-council of December 2, 1895, set out definite regulations concerning weighers and weighing. The weigher was to have sole control of the scales and was to issue a weight certificate on a prescribed form. He was subject to the same penalties as grain inspectors for incorrect weights. He had to take an oath of office, give proper bonds before starting work, and could appoint his assistants subject to approval by the Department of Inland Revenue. He was allowed 25 cents per car for weighing.



## Chapter 8

### GOVERNMENT ADMINISTRATION AND SUPERVISION OF GRAIN INSPECTION

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During the years 1899 and 1900, two fundamental changes were made in the Canadian grain inspection system. In the former year the government undertook the administration and supervision of inspection, and in the latter year the scope of grain inspection was enlarged to include the regulation of non-grading activities. Both changes were the result of conditions arising out of the shifting of the centre of grain production to western Canada which so altered the technique of grain inspection that each change is treated in a separate chapter. The present chapter will be devoted to the change in the grading system.

The agricultural settlement of the western provinces was the result of the natural overflow of population from the east. The influx of people into western Canada, however, was not a gradual movement of population from Ontario, the province adjacent on the east of the Canadian prairies. A large tract of land unsuitable for agricultural purposes separated the agricultural regions of Ontario and Manitoba, and deflected the gradual movement of population westward from Ontario through the United States. When the



Great Plains area of the United States became filled up, the movement of population turned northward to the Canadian prairies. This movement into western Canada was accelerated about the time the railways entered the region.

In addition to the population movement, a second factor, railway construction, promoted the agricultural settlement of western Canada. Although the movement of population into new regions is followed by the construction of railways, the first railway to cross the Canadian prairie had not settlement as its primary objective. It was the wish of the Fathers of Confederation to unite all the British North American colonies into one Dominion. British Columbia was separated from the British colonies of eastern Canada by a vast stretch of practically uninhabited land devoid of an all-Canadian route of communication between the two areas. British Columbia was induced to enter Confederation in 1871 by the promise of a railway linking it with eastern Canada. This promise was fulfilled by the building of the Canadian Pacific Railway which reached Winnipeg in 1883. Following the completion of the railway to the Pacific coast, agricultural settlement rapidly increased in western Canada.

Still another factor should be noted which materially assisted in the opening up of the west. This factor was the increasing demand for hard red spring wheat. The invention





of the purifier in 1870 and the rolling mill in 1875 brought changes in the milling industry which enabled the miller to produce the most desired quality of flour from the hard red spring wheats. These wheats formerly had been held in disrepute. It was also found that the highest quality of hard red spring wheat was produced under the arid and semi-arid climate of the prairies. The discovery of the west's ability to produce a high quality wheat together with the rapidity of bringing large areas of cheap virgin prairie under cultivation added to the impetus of agricultural settlement in western Canada.

The influence of western grain on the grain inspection system was felt during the very early years of the agricultural settlement of the Canadian prairies. In a previous chapter it was noted that in 1883 the discrimination was removed against Black Sea and Flinty Fife wheat grown in Manitoba and the North West Territories. In 1885 separate grades were established for wheat grown in the west. In 1889 western Canada secured its own standards board.

During the closing years of the 19th century, the farmers of western Canada became greatly dissatisfied with conditions surrounding the grading and marketing of grain. Some of their complaints were the direct result of grain inspection outgrowing its means of supervision. Grain



inspection had become national in character but still remained under local supervision. Other complaints arose out of the operation of the elevator monopoly. These latter complaints occupied a more prominent place than did those concerning grading.

Many organizations were interested in the proper conduct of the grain trade. One of these, the standards board, was composed of representatives of both the grain trade and the producers. Along with their work of selecting standard samples, they also made recommendations to the Dominion government affecting the grain trade in western Canada. Early in 1899 representatives from the western standards board recommended (1) that final inspection be at Winnipeg, that standards (definitions) be permanent, and that inspectors be remunerated by salary in place of the fee system.

The 1899 amendment of the General Inspection Act brought some fundamental changes into the Canadian grain inspection system. The most important changes were the governments assumption of the supervision and administration of grain inspection by making inspectors officials of the government; Winnipeg inspection was made final; a survey board was located at Winnipeg; no certificate was to be issued east of Fort William for a grade higher than the western certificate; the purchase of grain subject to

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(1) North West Farmer, April 20, 1899.



inspector's grade and dockage; no mixing of grain in public terminal elevators; and a number of regulations governing the operation of elevators. It was provided that the grade definitions could not be changed except by act of parliament. In the following year flax grades were defined for the first time, and, in the intervening years up to 1904, every year saw some change in the act.

In 1904 all the provisions respecting the inspection of grain were removed from the General Inspection Act and placed in the Grain Inspection Act of that year (1) where they remained for two years. In 1906 they were returned to a general act called the Inspection and Sale Act. This act continued in force until 1912 when the part dealing with the inspection of grain was incorporated in the new Canada Grain Act.

The Consumer's Discrimination was brought closer to the Producer by changes in the Inspection Service in 1899.

The increase of grain production in western Canada was responsible for introducing several important changes in the inspection service. These changes improved the inspection service and increased the facility with which the consumer's discrimination was transferred to the producer.

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(1) Statutes, Canada, 1904, c 15.





The change in the basis for remunerating inspectors was one which tended to more uniform grading. In Ontario the volume of inspection at various inspection points did not exhibit such wide variations as in western Canada. The bulk of the grain from western Canada passed through one inspection point and the post of the inspector at that point was a lucrative one. We have already observed that the government made provision to prevent high "salaries" at a few inspection points. Under the fee system, there would be a tendency at inspection points handling a small volume for higher grading to induce the flow of grain to that point. The change to a salary basis was advocated by the Winnipeg grain exchange and the western standards board.

The act of 1899 (1) also created the inspection district of Manitoba which included all the territory west of Port Arthur. This change segregated the administration of inspection in western Canada from that of eastern Canada. The offices of the inspection division were moved from Fort William to Winnipeg and grading at the latter point was made final. This speeded up the unloading of railway cars at lake terminals as it avoided delays attended on inspection at the time of unloading.

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(1) Statutes, Canada, 1899, c 25.



A western survey board was created for western Canada with headquarters at Winnipeg. This too speeded up car unloading as it permitted the settlement of disputes over grading in a much shorter time than when the survey board was located at Toronto. With final inspection at Winnipeg, it was possible to protest against the grading, if found unsatisfactory, and institute proceedings for a survey before the identity of the grain was lost in the terminal elevators. In 1899 if the owner or producer was dissatisfied with the inspector's grading, he could appeal to the chief inspector, whose decision was final, unless further appeal was made to the Survey Board within 24 hours.

Another type of dispute over grading developed in western Canada concerning the purchase of street grain by country elevators. The section of the act governing this form of dispute is self-explanatory;

"15. Whenever there shall arise a difference of opinion between any farmer selling wheat and any wheat buyer as to the grading of such wheat, the farmer while taking the price offered for his wheat as of lower grade than that to which, in his opinion, it belongs, may insist on a sample being selected and agreed on between buyer and seller, which sample shall be parcelled and sealed and sent to the Chief Inspector at Winnipeg, and the said Chief Inspector shall grade the said wheat without delay and make a return of his grading to both parties, and if the said Chief Inspector finds the said wheat to be of a higher grade than that on which the price had been already paid, then the said buyer shall pay to the farmer aforesaid the difference between the price



"which he had already been paid and that which should have been paid in the first instance had the grade afterwards fixed by the Chief Inspector been agreed upon at the time of the sale".

The office of chief weighmaster was created in 1899 and was to be filled by appointment by the Governor-in-Council. His duties were to be defined by order-in-council and included the appointment of weighmasters and assistants, and the adoption of rules governing weighing, subject to approval by the Minister of Inland Revenue. In 1900 Weighmasters were to supervise and control the weighing of grain subject to inspection; to issue a certificate of weight showing the car number, car initial, where weighed, date, contents and weight. The fees for carload lots in and out of elevators was 25 cents and for cargoes 30 cents per 1000 bushels. The office of Chief Weighmaster and Chief Inspector could be combined. In 1903 the act was amended to provide for the appointment of a chief weighmaster and assistants for east of Manitoba.

Continuing the policy adopted during the period 1885-1899, and accepting the recommendation of the western standards board, the government brought the selection of standard samples more completely within their own control. In 1899 the selection of standard samples for the statutory grades was made one of the duties of the chief inspector. The standards board was thus relieved of this





duty but they continued to select the standard samples for commercial grades. Although the selection of standard samples by a standards board promoted the use throughout the country of uniform samples, the standards board is not free from influence tending to variation in samples from year to year. The members of the board include grain merchants and farmers who may be influenced by a short sighted policy to either raise or lower the quality of the standard samples. In 1903 the appointment of persons to the standards board was made permanent "until superceded" and replaced by other appointments".

The changes introduced into the inspection service were primarily designed to protect the producer. That protection, however, was obtained by carrying the consumer's discriminations and preferences more distinctly and more clearly to the producer. The consumer preferred uniform grades and more uniform grading was promoted by removing the influence of salary on the grading of inspectors, by providing more uniform standard samples from year to year, and by facilitating a closer check-up on inspector's work through the possibility of more frequent appeal. The producer was further protected by providing means for ensuring correct anticipated grading by local country elevator agents.



The Response of Statutory Grade Definitions to Changes in  
Production.

At the commencement of Government administration and supervision of inspection, one of the fundamental changes effected in defining grades was that statutory grades could not be altered by order-in-council. This change was introduced to avoid the fluctuation in quality of grades which was discrediting Canadian grain on the European market.

During the period 1899-1912 a number of changes were made in the grades of wheat (1). Some grades were discontinued, others added; some lowered and others raised; and some reworded. Both "Extra Manitoba Hard" and "No 2 Manitoba Hard" were discontinued. These, along with "No 1 Manitoba Hard" were known as the export grades during the nineties. With permission to export Manitoba northern grades, and with permission to mix, the Manitoba Hard grades have not been exported, and, with the exception of No 1 Manitoba Hard, have been discontinued. One factor largely responsible for the discontinuance of such high quality grades is the expansion of wheat acreage into areas less capable of producing high quality wheat. About 1926 so little wheat graded No 1 Hard it was suggested that that

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(1) See tables 4, 5, 6, 7 and 8 appendix.



grade be discontinued, but a few years later, under exceptionally favorable weather conditions, creditable quantities of this grade were produced.

Another point of interest in the wheat grades during the first decade of the present century is the classification of Alberta Red Winter wheat in 1906. Red Fife wheat is a late maturing variety, and quite frequently is subject to injury from frost. Attempts to overcome Red Fife's handicap led to the introduction of winter wheat into the southwestern portion of Alberta. The climate of this area was favorable to winter wheat, and large quantities of it were grown before the introduction of Marquis.

The statutory oat grades of eastern Canada were increased in number in 1899 and again in 1904. In both years the increase was obtained by splitting up the lower grades. In 1904 four classes of oats were defined; white, black, mixed and clipped. Hitherto there had been only one class. Eastern grades were used in western Canada until 1904 when a separate classification was defined for the latter region. Western oat grades carried a much heavier weight requirement than those for the eastern inspection division.

Not all the interesting historical points concern the statutory grades. In 1901 considerable dissatisfaction was created over the commercial grades of "Alberta Oats".





In that year oats grown in Alberta were frosted. The grain standards board established new grades for frosted oats and named them Alberta oats. Complaints were raised over the use of the word Alberta for such oats. It was claimed that the Winnipeg grain combine sought to prevent Alberta dealers from fulfilling their contracts with the army, then engaged in the Boer war. The complaint was answered by Mr. C.N. Bell, secretary of the Winnipeg Board of Trade:- "The Resolution reads as follows; 'owing to the differences in the general character of oats grown this season in some districts of the North West Territories, hereby resolved that such oats shall be graded as follows; No 1 Alberta oats shall be plump, clean and reasonably free from other grain and weigh not less than 37 pounds per bushel. No 2 Alberta oats shall be reasonably clean and reasonably free from other grain and weigh not less than 36 pounds per bushel. Above applies only to injured grain. Sound grain grades as defined in the act'" (1). Frosted oats have since been defined as feed oats.

The only change occurring in the eastern barley grades was that a weight requirement was added to No 4 barley. Eastern grades of barley were used in western Canada with provision in 1899 to use the name Manitoba.

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(1) Edmonton Bulletin, December 6, 1901.



In 1904 western barley grades were defined which were similar to those of the east except that they were named Manitoba, and No 3 carried a weight requirement.

The only change in the rye grades during this period occurred in 1904. Weight requirements were added to the eastern grades, and two grades, No's 2 and 3, were made out of the former No 2. In the same year western rye grades were first defined. They were similar to those of eastern Canada prior to 1904.

Two new classifications, "Marrowfat" and "Mixed", were added to the grades of peas in 1904. The marrowfat grades were similar to those of the white except in variety. A requirement of freedom from bugs and worm eaten peas was added to the two top grades in both classes.

A great increase in the number of corn grades occurred in 1904. Hitherto there had been only one grade each of white and yellow corn, both undefined. The new grades consisted of No's 1, 2 and 3 for both white and yellow. The grades of these classes of corn were defined for the first time. Mixed corn which formerly graded No's 1 and 2, after 1904 graded No's 2 and 3. The name only was changed.



Buckwheat Grades

Considerable quantities of buckwheat have been produced in Canada for many years. In 1851 over two million bushels were reported from the area now included in the eastern inspection division (1). Production has slowly increased until it now averages, for the past ten years, approximately ten million bushels annually.

In 1860 buckwheat production in Upper Canada exceeded that of rye, but, unlike the latter, it was excluded from the grains graded under the inspection act passed a few years later, 1863 (2). Its omission from the grain inspection act of that year and until 1904 was due to its relative unimportance in the grain trade. During the last ten years only 3 to 4 per cent of the total buckwheat production has passed through the hands of grain inspection officials (3).

When buckwheat was first inspected in 1904 only 741,041 bushels were graded out of a total production of approximately five million bushels. Buckwheat's unimportance in the grain trade is due to its limited utilization in commerce and industry. The quantity used for human

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(1) Compiled from census returns. See table 29, appendix.

(2) Census of Upper Canada, 1860-61. Compare tables 26 & 29.

(3) See chart 6, appendices.





consumption is small. It has no superiority over our standard feed grains for feeding livestock, consequently, its production is restricted largely by its utilization on the farm.

Since there is little demand for its grain beyond what can be fed on the farm, there is little incentive to promote buckwheat production in the strictly grain growing areas. The bulk of our buckwheat now comes from the mixed farming regions.

The grades of buckwheat defined in 1904 consisted of No's 1, 2, 3, No Grade and No Established Grade (1). The definitions were quite simple and have undergone little change since that date.

#### Flax Grades

Another grain graded for the first time during the period 1899-1912 was flaxseed. It was not until the opening up of the west that flax for seed was grown to any appreciable extent in Canada. Flax is peculiarly adapted to pioneering conditions on the prairies, and, when new settlers poured into the prairie provinces, flax production increased very rapidly. Flax is essentially a cash crop. Even though relatively small quantities were produced, practically all of it found its way to the grain

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(1) See appendices, table 21.



markets.

Grades of flax were first defined in 1900. The grades were No's 1, 2 and Rejected. The definitions contained weight requirements, and a maximum percentage damage permissible. In 1904 the percentage of damage permitted in the different grades was increased.

#### The Foreign Grain Inspection Act

The tendency for commodities to seek the cheapest route to market often directs their shipment through foreign countries. The flow of grain through a foreign country in response to cheap transportation rates is well illustrated on the North American continent(1). The United States harvest matures several weeks earlier than the Canadian. Montreal is on the direct line to Europe from the Western States, and while water navigation continues, has the advantage of a cheaper and more direct mode of transportation. The facilities for handling grain at the port of Montreal are superior to those at the port of New York. As a result, the advantages of the St. Lawrence route attract heavy shipments from United States lake terminals to Montreal. Later in the season much of the Canadian crop reaches the Atlantic seaboard through ports of the United States because navigation on the St. Lawrence

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(1) Rpt. Royal Grain Inquiry Commission, 1925, p 146.



river closes about two weeks earlier than it does on the Great Lakes and because of the desire to place the grain in a more favorable export position than that of winter storage at the head of the Great Lakes. The explanation for a large movement of United States grain through the port of Montreal and a large movement of Canadian grain through New York and other United States Atlantic ports rests chiefly on seasonal changes affecting the St. Lawrence route.

The St. Lawrence is encumbered with several natural barriers which prevent the navigation of ocean-going vessels to the upper reaches of the Great Lakes. Shipments of grain on lake carriers must be broken up and reassembled into ocean cargoes at ports accessible to deep-water vessels. The St. Lawrence route passes into Canadian territory where at the port of Montreal grain shipments are transferred from lake to ocean carriers. Shipments of United States grain by the St. Lawrence route must therefore be broken up in the territory of a foreign country and the problem of inspecting this grain early confronted exporters.

Until 1900 no legislation was provided for the inspection of foreign grain passing through Canada. For some time (1), considerable quantities of grain from the United States had been shipped to the European market by

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(1) Mansard, 1900, p 4681.





way of the port of Montreal. Inspectors at Montreal had been in the habit of giving a voluntary inspection certificate on this grain, but it was discovered that this certificate had no legal value because the Canadian inspectors had no authority to inspect foreign grain. On this ground, European buyers refused to accept the Canadian certificate. The grain came from Chicago and Duluth and shipments had to be broken up before reaching the Atlantic seaboard. At Montreal it was handled in elevators in the same manner as Canadian grain. As little of this grain was consigned direct from Chicago or Duluth to European importers, the United States' certificates were discredited because the grain could not be shipped in bond. The result was that this grain reached Europe technically not inspected. At the request of the Montreal Corn Exchange Association and Chicago shippers, the government overcame the difficulty by passing in 1900 an "Act respecting the Inspection of Foreign Grain" (1).

This act provided for the inspection of foreign grain in transit through Canada. Grading was based on a special set of standards established by the board of examiners of the Board of Trade for the district where such inspection took place. Inspection certificates covering such grain

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(1) Statutes, Canada, 1900, c 40.



stated that the grain was of United States production.

The act was repealed in 1904 (1) but its provisions with a few amendments were incorporated in the Grain Inspection Act of the same year. The standard samples were selected by the standards board in place of the examiners as in 1900, and the Governor-in-Council retained the right to reject such standards. Appeals were handled similarly to those arising from the inspection of Canadian grain.

Although the Foreign Grain Inspection Act was short lived, its provisions have been incorporated with little change in the various acts governing the inspection of grain. These provisions have been grouped together in one section in the Grain Inspection Act from 1904 to 1906, in the Inspection and Sales Act from 1906 to 1912, and in the Canada Grain Act from 1912 to 1930. When consolidating the Canada Grain Act in 1930, the provisions respecting the inspection of foreign grain were distributed in various parts of the act.

An Act respecting the Packaging and Sale of Certain  
Staple Commodities.(2)

There was a tendency in legislative circles during the

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(1) Statutes, Canada, 1904, c 15.

(2) Statutes, Canada, 1901, c 26.



the early years of the present century to bring all regulations concerning the sale of a particular commodity under the jurisdiction of one department and of one statute. Regulations concerning weights and measures were affected by this tendency. Prior to Confederation the legal weight per bushel of various seeds and grains had been defined in Sales Acts. After Confederation the Sales Acts were consolidated in the Weights and Measures Acts which were administered by the Minister of Inland Revenue. As trade and commerce grew the weighing of commodities increased in importance. One of the grievances of farmers, during the early development of the grain trade in Western Canada, pertained to the weighing of grain. It, along with other grievances, became the subject of inquiry by the Royal Commission of 1900. Since weight is so closely linked up with other factors in the sale of commodities, it was natural that all these considerations be regulated under one act. Consequently, there was a tendency to transfer legislation concerning the legal weight per bushel of grain to those acts and departments of the government regulating other phases of marketing that commodity.

In 1900 grain inspection was placed under the administration of the Department of Trade and Commerce, and the following year legislation concerning the legal





weight per bushel of grain was transferred from the Weights and Measures Act to an "Act respecting the Packaging and Sale of Certain Staple Commodities". This act remained under the administration of the Minister of Inland Revenue, thus separating it from commodity inspection, but the provisions concerning weight per bushel were brought together with other regulations concerning the sale of commodities. Provisions respecting the legal weight per bushel remained in this act and under the administration of the Minister of Inland Revenue until 1906 when they were incorporated in the Inspection and Sale Act (1) administered by the Minister of Trade and Commerce. This last step brought the legal weight per bushel and grain inspection under the control of one act and the administration of one minister.

#### The Grain Inspection Act of 1904 (2)

For some time the grain business had been assuming dimensions of increasing importance. It was decided in 1904 to bring the inspection of grain under a separate act and not include it with that of a number of other commodities. The Grain Inspection Act consolidated in one measure a very large number of amendments introduced from

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(1) Statutes, Canada, R.S. 1906, c 85.

(2) Statutes, Canada, 1904, c 15.



time to time, and also assimilated to some extent the law as it then existed between the two divisions of eastern and western Canada(1). The act was purely a grading act. Special provisions were made for each of the two inspection divisions. Separate sets of grades were defined for each division. After a life of only two years, this act was put back into the Inspection and Sale Act which replaced the General Inspection Act in 1906 (2)

### The Department of Trade and Commerce

An act of 1887 (3) created the Department of Trade and Commerce and charged the minister of the new department with the administration and execution of acts relating to trade and commerce generally. It was not until 1901 (4) that grain inspection acts came under his administration. These acts included the Manitoba Grain Act, the General Inspection Act, and an Act respecting the Inspection of Foreign Grain. These acts or the parts of them that refer to grain have since been consolidated into the Canada Grain Act which is at present administered under the direction of the Minister of Trade and Commerce.

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- (1) Hansard, 1905, p 3126,
  - (2) Statutes, Canada, R.S. 1906, c 85
  - (3) Statutes, Canada, 1887, c 10.
  - (4) Statutes, Canada, 1901, c 30.



## Chapter 9

### THE EXTENSION OF GRAIN INSPECTION TO INCLUDE THE REGULATION OF NON-GRADING ACTIVITIES.

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The second fundamental change introduced into the Canadian grain inspection system at the close of the 19th century was the extension of inspection to include the regulation of non-grading activities. Grain inspection was defined in the introductory chapter as the regulation of all those phases of marketing dealt with in the Canada Grain Act. We have seen that commodity inspection arose as the result of an attempt to overcome fraud, and that the benefits accruing from commodity grading led to an extension of that service to the marketing of grain. It was alleged that fraud was practiced in other phases of grain marketing, and efforts to curb it resulted in an extension of grain inspection to include the regulation of non-grading activities. Until 1900 the Canadian grain inspection system was restricted to the grading and weighing of grain.

The regulation of non-grading activities by the grain inspection system arose out of conditions and practices surrounding the operation of elevators in Western Canada. The situation may be traced to the influence of the natural vegetative covering, and the rapidity of settling





the prairie area on the increase of agricultural production and the demand for railway transportation. The prairie region was characterized by the absence of tree growth which permitted the rapid cultivation of virgin land. In a very few years a new settler could bring all his prairie farm under the plow with little more labor and expense than was required in the ordinary working of cultivated land. In addition to the rapid increase of cultivated land on individual farms, there was an extensive influx of immigration which increased enormously the area in crops and the agricultural production. At the same time, unlike eastern pioneer settlement, production was largely for market and necessitated transportation facilities to carry the grain to the ultimate consumer. Although railway expansion was tremendous it could not keep pace with the demands of agricultural production for transportation. The cheapest route for grain to reach market was by rail to the head of the lakes and then by water to the eastern seaboard. The shortness of the season for harvesting and marketing the crop made it necessary that as much of the crop as possible be rushed to the lake ports before winter set in. As a result, the ordinary rolling stock of the railways was insufficient to cope with the needs for transportation during the period between the time that the



grain first became ready for shipment and the time when it would be too late for it to be shipped in vessels at lake ports. As a consequence, there was great difficulty in finding proper accomodation for storage of the grain, which was brought in at country points faster than it could be shipped out.

Before the modern elevator was introduced into western Canada, grain was handled at country shipping points in flat warehouses. The railway at that time had insufficient cars to transport the grain to the head of the lakes as rapidly as it was received at the country shipping point, and every fall its equipment was congested with grain. "To obviate such difficulties and to encourage the erection of elevators to store, ship and handle grain, the Canadian Pacific Railway Company offered...to parties who would build elevators of a capacity of at least 25,000 bushels,.... protection from the competition of grain loaded through flat warehouses, or direct from farmer's vehicles, or otherwise than through standard elevators" (1). Elevators were thus given a monopoly on the handling of grain. The elevators provided more storage space than the flat warehouses and also speeded up car loading.

If there was an elevator at his shipping point, a farmer was obliged to ship his grain through the elevator. It was

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(1) Report, Royal Grain Inquiry Commission, 1900.



not long before numerous complaints arose. The same prices were offered by the different elevators at a shipping point, and farmers concluded that there must be an elevator combine which set the price of grain to the disadvantage of the farmer. When delivering street grain, the farmer often disagreed with the grade and dockage offered by the elevator operator, but, what could he do about it? The farmer had to accept the grade and dockage offered or take the grain home. Farmers also believed that they were given short weights and that when their grain was special binned its identity was lost.

For a long time friction had been growing in western Canada among the transportation companies, grain companies, farmers and all those engaged in the handling and storage of grain. "The grievance of the western grain growers in regard to the shipping of their grain was projected into the Federal Parliament when Mr. James Douglas, member for East Assiniboia (N.W.T.) introduced, in the session of 1898, a 'bill to regulate the shipping of grain by railway companies in Manitoba and the North-West Territories'. Its main features called for a legal recognition of the right of farmers to ship their grain through flat warehouses and to obtain cars for direct loading from the wagon. Although the bill failed to emerge from the Railway Committee of the





House, the right of the C.P.R. to refuse cars to farmers had been publicly challenged in the legislature from which the railway had derived its charter" (1). "The threat of federal regulation...was not without effect on the C.P.R. Before the 1898 crop began to move, the company announced that it would furnish cars to farmers who wished to load direct. This service was, of course, subject to conditions of car supply, and elevators still enjoyed an effective priority in distribution. If a farmer obtained a car, it was by favor of the company, not by virtue of an enforceable right. At the best the concession was of advantage only to farmers living sufficiently near to the railway to be able to load the assigned car within the twenty-four hours before demurrage began to accrue. Without the right to order cars to flat warehouses where long-haul wagonloads could be accumulated, the company's announcement meant little to the more removed homesteader. A great many shipping points, moreover, were not equipped with loading platforms, and there was no obligation on the part of the railway to furnish them "(2).

"The belated action of the C.P.R. did not forestall, therefore, the reintroduction of Mr. Douglas's bill in the

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(1) Patton, Grain Growers Cooperation in Western Canada, p 20

(2) Ibid.





following session, with an added clause calling for the appointment of a government inspector to supervise the shipment and handling of grain between country points and terminals. The discussion of the western members' representations before a special committee of the House revealed such conflict of fact and opinion, and suggested such far-reaching implications, that the Laurier ministry became convinced of the necessity of a fuller and closer investigation of the question than was possible within the committee rooms of the House. Accordingly, before the close of the 1899 session, the government announced the appointment of a Royal Commission on the Shipment and Transportation of Grain in Manitoba and the North-West Territories"(1).

In addition to the appointment of the Royal Commission, an amendment of the General Inspection Act in 1899 alleviated some of the dissatisfaction of western farmers. "The Governor-in-Council may make such regulations as he deems necessary for the governance of inspectors in their work of inspection and as to the method of dealing with public elevators and grain warehouses, and may require the owners of such public elevators and warehouses to take a license and to make such periodical statements and returns

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(1) Patton, p 21.



of their receipts and shipments of grain as to him seems necessary for the information of the Minister of Inland Revenue"(1). The 1899 act of amendment also contained a schedule of "Regulations with respect to Wheat and other Grain grown west of Port Arthur". These regulations dealt with the grading of grain, but one section, 15, was designed to alleviate one of the farmer's complaints - namely, the disagreement as to grade and dockage between the farmer and the country elevator operator (2).

The Investigation of Producers' Complaints by Royal  
Commission

The Royal Commission appointed in 1899 were asked to investigate the following grievances:- (3)

1. That the vender of grain is at present subject to an unfair and excessive dockage of his grain at the time of sale;
2. That doubt exists as to the fairness of the weights allowed or used by owners of elevators;
3. That the owners of elevators enjoy a monopoly in the purchase of grain by refusing to permit the erection of flat warehouses where standard elevators are situated and are able to keep the prices of grain below its true value to their own benefit and to the disadvantage of others who are specially interested in the grain trade, and of the public generally.

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(1) Statutes, Canada, 1899, c 25, s 5.

(2) Statutes, Canada, 1899, c 25. See page 147.

(3) Sessional Papers, 81a, 1900.



After taking evidence at various points throughout the west and reviewing the grain inspection system of Minnesota, the commission in their report of March, 1900, submitted a number of recommendations which that year were embodied in the Manitoba Grain Act.

The Manitoba Grain Act assists the Producer to receive the results of the Consumers' Discrimination

The Manitoba Grain Act (1), although a federal statute, applied only to the inspection district of Manitoba. It was from this area that the grievances originated respecting the handling and shipping of grain. Grain production in Ontario was on the decline and was not attended with such factors which produced the grievances originating in the west. The Manitoba Grain Act was not concerned with the grading of grain as this service continued to be administered under the regulation of the General Inspection Act. The subject matter of the Manitoba Grain Act consisted of regulations seeking to control the alleged discriminatory practices concerned with the handling and shipping of grain. The appointment of a warehouse commissioner was provided for to carry out the provisions of the act. A chief weighmaster, with his assistants, was given control and supervision of all weighing at terminals. Special

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(1) Statutes, Canada, 1900, c 39.





sections of the act dealt with disagreement as to grade and dockage, car distribution, the regulation of country and terminal elevators, loading platforms and grain buyers generally.

### The Warehouse Commissioner

The regulation of the grain trade by means of the Manitoba Grain Act necessitated the appointment of an official to carry out its provisions. The act provided (1),-

"The Governor in Council may appoint an officer, to be known as the Warehouse Commissioner for the District of Manitoba, who shall hold office during pleasure, and who shall be subject to the control and management of the Department of Inland Revenue, and who shall in his oath of office declare that he is not directly or indirectly pecuniarily interested in the grain trade; and the salary of the said Commissioner and the security to be given by him shall be determined by the Governor in Council."

The duties of the Warehouse Commissioner as outlined in the act were (2),

"(a) to require all elevators, warehouses, mills and grain commission merchants to take out an annual license;

(b) to fix the amount of the bonds to be given by the different owners and operators of elevators, mills and flat warehouses, and by grain commission merchants;

(c) to require the persons licensed to keep books in forms approved by the commissioner or by the Governor in Council;

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(1) Manitoba Grain Act, 1900, c 39, s 3.

(2) Ibid, s 4.



"(d) to supervise the handling and storage of grain, in and out of elevators, warehouses and cars;

(e) to receive and investigate all complaints made in writing, under oath, of undue dockage, improper weights or grading, refusal or neglect to furnish cars within a reasonable time, all complaints of fraud or oppression by any person, firm or corporation, owning or operating elevator, warehouse, mill or railroad, or by any grain commission merchant, and to apply such remedy as is provided by statute;

(f) to enforce rules and regulations made under this act, and to report to the Minister of Inland Revenue such changes therein as he deems advisable;

(g) to institute prosecutions at the Government expense whenever he considers a case proper therefor."

In 1900 a warehouse commissioner was appointed. He was placed in charge of what has been classed here as non-grading activities. Between 1900 and 1912 there were in reality two grain acts whose administration <sup>was in charge</sup> of two officials working independently of each other but both under the Minister of Trade and Commerce. In 1912 the warehouse commissioner was replaced by the Board of Grain Commissioners whose duties have since grown to include the regulation of all matters relating to the handling of grain.

### Loading Platforms

Regulations concerning loading platforms arose out of the desire on the part of farmers of avoiding the necessity of being forced to ship their grain through the country elevators. They, the legislators at Ottawa and the Royal Commission, felt that an alternative method of shipping



their grain would result in a more satisfactory treatment of the farmers by the elevators. Until the railways removed the monopoly in 1898, no grain loaded over a platform was taken at shipping points having <sup>so</sup> elevator. The Manitoba Grain Act compelled the railway companies to erect platforms at country shipping points upon due application being made by a specified number of farmers to the warehouse commissioner. The regulations contained a clause requiring the loading to be done in 24 hours, which clause operated against the extensive use of the loading platform. The present Canada Grain Act provides for the erection and maintenance of loading platforms, but these railway structures are little used for loading grain.(1)

#### Car Distribution

The main purpose of the Manitoba Grain Act was to give the farmer greater freedom in the shipping and marketing of his grain, and make him less dependent upon the privileged elevator companies. Much was expected from the increased use of flat warehouses, but very few of these structures were built after 1900. The real alternative to marketing through the elevator was loading over the platform. The legal right to load over platform was of little advantage to the shipper, however, unless the railway supplied cars as well as platforms when and where they were needed (2).

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(2) Patton, p 31. (1) MacMillan, p 20.





The crop of 1901 exceeded all previous western records and the strain on railroad equipment was accordingly acute. Elevator companies as well as farmers were embarrassed by the car shortage. The farmers complained that the elevators obtained the preference in the allotment of cars which were locally available. Informal indignation meetings were held at many points and finally led to the formation of the Territorial Grain Growers Association in December 1901.

During the winter of 1901-2 the first grain growers convention passed resolutions requesting amendment to the Manitoba Grain Act to provide (a) compulsory erection of loading platforms, (b) that railways be compelled to supply farmers with cars to load directly from vehicles, and (c) that during a car shortage railway agents apportion available cars in the order in which they are applied for. The recommendations were incorporated in the Manitoba Grain Act.

The 1902 crop was heavier than that of 1901, and the C.P.R. failed to allot cars according to the amended car-distribution clauses of the Manitoba Grain Act. The alert Territorial Grain Growers Association, failing to secure better car distribution, laid formal complaint with the Warehouse Commissioner against the C.P.R. agent at Sinitaluta. The agent was found guilty, fined fifty dollars and the decision sustained in the supreme court. The shipping



amendments of 1902 were redrafted in 1903. They set forth the procedure to be followed in the allotment of cars, and included numerous safeguards for the protection of the farmer shipper. At each shipping points railway agents were required to keep car-order books of a form approved by the Warehouse Commissioner. Each applicant, whether elevator company or individual farmer, was given a number in the order of application. Where an applicant required two or more cars, he was required to make two or more applications as the case might be. Cars were to be allotted strictly in the order of application, and no applicant could obtain a second car until all preceeding applicants had received one. If an applicant did not take his car, it should be assigned to the next in order, and heavy penalties were prescribed for selling or transferring the right to a car. All railway agents were further required to post daily a record showing the name and application number of each shipper to whom cars had been allotted during the preceeding twenty-four hours.

#### Terminal Elevators.

A complaint strongly voiced against the terminal elevators was that of mixing. It was argued by farmers and others that mixing lowered the quality of the grades, that the value and price of the grade fell in consequence, and



that the farmer suffered. As a result of these protests, the Manitoba Grain Act was amended to prohibit the practice of mixing. All elevators located at a point declared to be a terminal were required to take out a license from the warehouse commissioner. The person receiving the license was required to give a bond. The act specifically mentioned his duties, which were: to receive grain for storage; no mixing of grades was permitted; to issue a warehouse receipt for grain received; and to give a weekly statement of grain in store.

The operation of terminal elevators was permitted upon application for and receipt of a license from the warehouse commissioner. Control over the licensee was maintained by the possibility of cancelling the license. The same sort of control was exercised over country elevators, flat warehouses, commission agents and track buyers.



## Chapter 10

### CENTRALIZED CONTROL AND ADMINISTRATION OF GRAIN INSPECTION

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The last step in bringing grain inspection under the direct supervision and control of the government was accomplished in 1912 with the passing of the Canada Grain Act. Although grain inspection previously had been under the administration of one department, the actual supervision was divided between several officials. These officials worked in harmony, but there was an absence of control invested in one official or body in direct touch with the problems and workings of the system. The act brought the supervision and administration of grain inspection under one body, the Board of Grain Commissioners. The Board were given wide powers over certain phases of grain inspection which enabled them to adjust the system so as to increase the range of the consumer's discrimination transferred to the individual producer. At the same time, they were sufficiently in touch with the whole system to avoid adopting measures tending to discredit the system in the eyes of the consumer upon whose confidence rests the successful operation of grain inspection in Canada.





The Canada Grain Act Consolidates Legislation  
Respecting Grain Inspection

The Canada Grain Act consolidated into one statute the legislation affecting the grain trade previously found in the Manitoba Grain Act and in part 2 of the Inspection and Sale Act. One of the important changes introduced was the creation of a Board of Grain Commissioners to take over the duties of the warehouse commissioner and to supervise the inspection department. A number of changes were made in the definitions of the statutory grades.

A revision of the act in 1925 was based on the report of the Royal Grain Inquiry Commission of that year. The Commission found no grave irregularities, but made numerous suggestions covering various aspects of the trade (1). Recognition was given to the operation of private terminals or mixing houses. Provisions were incorporated in the act to provide for the operation of the wheat pools and in connection with the opening of the western route for export.

The act was revised in 1927 and again in 1930. In 1929 provision was made for the appointment of assistant commissioners to take over part of the

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(1) MacGibbon, The Canadian Grain Trade, p 67.



investigational work of the Board and to establish a closer relationship with the producer.

### The Board of Grain Commissioners Unifies Supervision

The Canada Grain Act provides for the appointment by the Governor-in-Council of a Board of Grain Commissioners who "shall devote the whole of their time to the performance of their duties under this act". The duties assigned to the Board in the 1912 act were quite numerous. They dealt with the control of those phases of the grain trade that were specified in the act. Considerable discussion arose in the House concerning the extent of the power given the Board. Farmers from the west wanted it independent from the government, but, since the government was responsible for the act, it was necessary that the government exercise some control over the Board. This was accomplished by making their actions subject to the approval of the Governor-in-Council, for example; "The Board may, with the approval of the Governor-in-Council, make regulations...". Their powers and duties have been extended from time to time and the matters on which they now may make regulations take up almost three pages of the act. They are still subject to control by the Governor-in-Council; (1)

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(1) Statutes, Canada, 1930 c 5, s 15.



"Any such regulation may at any time be disallowed by the Governor in Council and shall cease to have effect as from the date of its disallowance of which notice shall be given forthwith in the Canada Gazette".

To facilitate the policy of maintaining intimate contact with conditions throughout the country, four assistant commissioners were appointed in 1929. The section of the act (1) providing for their appointment defines their powers and duties;

"Subject to the provisions of subsection 3 of this section (2), each of the assistant commissioners shall have like powers and duty to receive and investigate complaints and also make investigations without complaint received and make findings thereon, as by the Act is given to and imposed upon the Board or any commissioner, and in addition thereto shall exercise and perform such other powers and duties of the Board or of a commissioner as the Board with the approval of the Governor-in-Council may authorize".

Changes in Grade Definitions more clearly interpret  
the Consumer's Preference

Changes were made in the grades of practically all classes of grain. These changes include the redefining of some grades, the addition of new grades, and the omission of others.

(1) Statutes, Canada, 1929, c 9.

(2) Subsection 3 is as follows; "There shall be an appeal to the Board within 15 days by any person dissatisfied with a decision of the assistant commissioner".

classes of some  
of some  
omission of o



Eastern wheat grades have changed very little in the past thirty years, indicating little demand for change as a result of decreased production. In accordance with the change in the method of definition adopted in 1930, all grades were redefined with but little change in composition. Extra white winter was omitted from the statutory grades in 1925.

The hard red spring wheat grades were all redefined to permit the inclusion of Marquis. There appears to have been an increase in the quality requirements of No 1 Hard and No's 1 and 2 Northern. No 4 which had been a commercial grade was made a statutory grade in 1930. A number of winter wheat grades were discontinued in 1930 on account of the decreased production of that wheat. Grades were provided in 1925 for Amber and Red Durum and Kota wheats. The latter two wheats failed to meet the expectations of those who advocated their production, and the grades for these wheats were omitted from the act in 1930.

Practically no changes have been made in the eastern oat grades since 1904. Western oat grades have been changed in 1912, 1925 and 1930. In 1912 the higher grades were renamed, grades provided for black and mixed oats, a number of feed grades were provided for frosted and dirty grain, and the qualifications of the higher grades



were raised. The division of the oat classification into two groups, sound and frosted, is dependent on the consumer's demand for porridge oats. Frosted oats possess a black discoloration in the suture or crease which is objected to by the consumer of rolled oats and oat meal.

In 1925 the top grade, Ex 1 C.W., was abolished. Very few oats grade higher than 2 C.W., and the existence of two high quality grades, neither used to any extent, was not warranted. In 1930 all grades, whose definitions contained a definite maximum percentage of impurities, were redefined. The weight requirement of both No's 1 and 2 C.W. were raised. Grades for black and mixed oats were discontinued as very few black "tame" oats are grown. Feed grades were lowered in quality and several lower grades added. The trend of change in the higher oat grades appears to have been upward, and that of the lower grades downward. Carelessness of production, such as the use of dirty land, may account for the increased number of feed grades.

Eastern barley grades have changed very little. In 1912 a weight requirement was added to the definition of No 1, the last of the grades to be so defined. The grades were redefined in 1930 with very little change.

The western barley grades had a few weight requirements



(183)

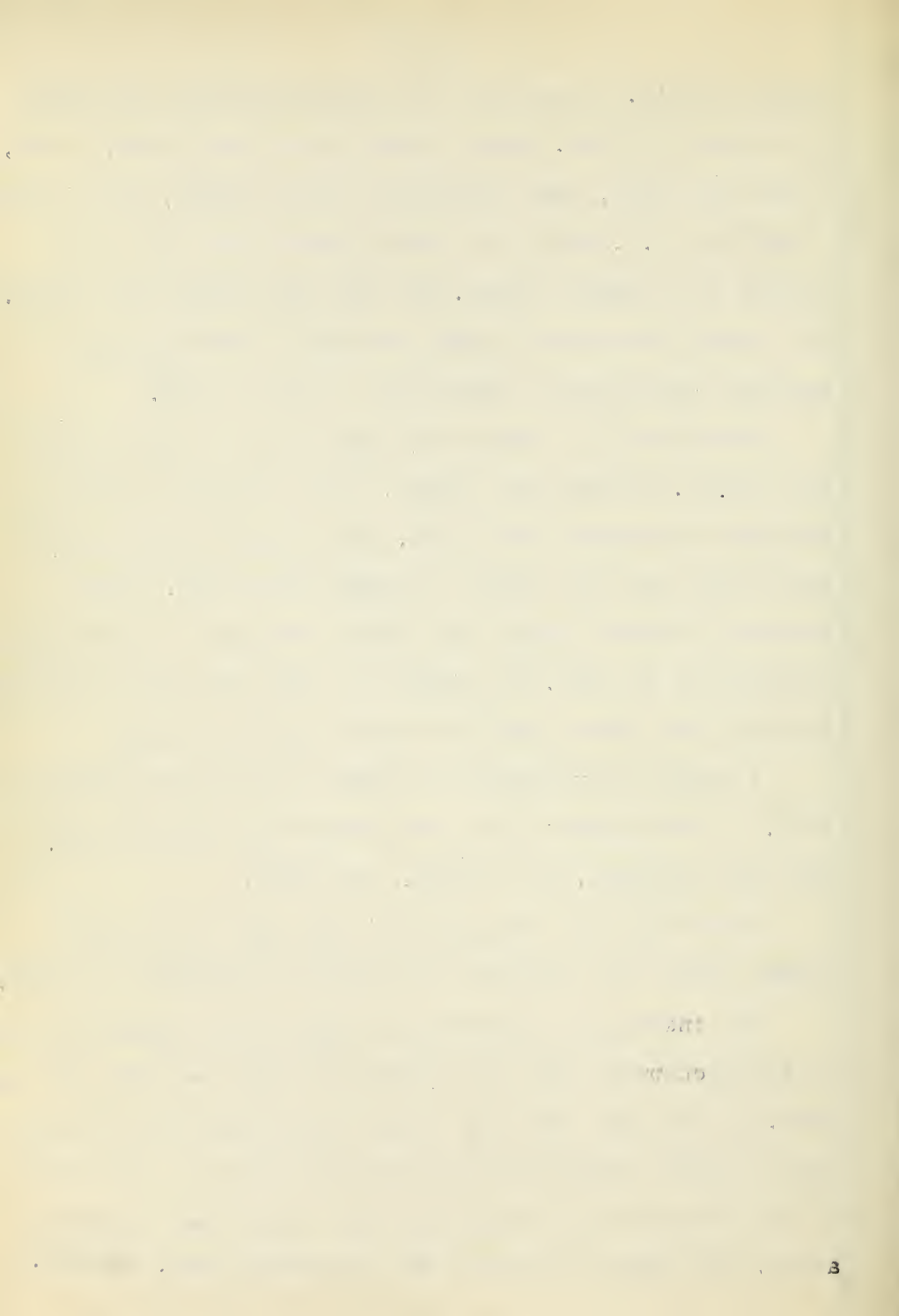
added in 1912. An entirely new classification was given in the act of 1930. Three classes were recognized, 2 row, 6 row and Trebl, each containing three grades, No's 1 and 2 and Ex 3 C.W. Barley of lower quality than Ex 3 was placed in a general class. Two new low grades were added. All grades were more rigidly defined by stating the maximum percentage of impurities in each grade.

Practically no change has been made in the eastern rye grades. Western rye grades, first defined in 1904, remained unchanged until 1925, when weight requirements were added and the number of grades increased. These changes followed closely the rapid increase of production culminating in 1922. The grades of 1930 were more strictly defined with added qualifications respecting ergot

A weight requirement was added to the corn grades in 1912. In 1930 grades were more definitely defined, and one new low grade, No 3 Mixed, was added.

Practically no changes have been made in the pea grades except the addition of weight requirements in 1912.

The increased production of flax which reached its peak in 1912 accounted for the addition of one new grade the same year. At the same time the weight requirement was lowered due to lower quality coming onto the market as the result of the expansion of production into newer less favorable areas. The number of grades was increased again in 1930.





Eastern buckwheat grades, established in 1904, have undergone practically no change. Western buckwheat grades were provided in 1925 due to the introduction of that crop into Manitoba. In 1930 western grades were more rigidly defined.

The Inspection Service assumes increased importance

Government control of the inspection system has grown to include the selection of standard samples for the commercial grades though nominally this work is still performed by the standards board. At present tentative standard samples of commercial grades are made up by the chief inspector, tested for baking quality in the grain research laboratory, and submitted for approval to the standards board. One third of the membership of the standards board consists of government officials. The Board of Grain Commissioners has power to "nominate or arrange for the nomination" of the remaining members of the standards board. Government control in the selection of standard samples is now practically complete.

The standard samples, whose development was traced in preceeding pages, have been used until recently for all grain graded in Canada, but the increased practice of mixing in terminal elevators has necessitated the adoption of a special sample called the "standard export sample".





Before mixing developed, all lots of any particular grade were binned together, and export shipments closely resembled the country average of that grade. In the practice of mixing, various qualities or grades are combined in a quantity of grain to produce a mixture which, when graded, will possess the minimum quality requirements of for that particular grade. Not all terminal elevators were permitted to mix grain for export shipment. Those that practiced mixing export grades carry ing the minimum quality requirement. Those denied the right to mix export grades resembling the country average of that particular grade. Such a situation resulted in a tendency to variation in the quality of export shipments. The export shipment of any particular grade may carry the average or the minimum quality of that grade. Uncertain of the quality he will receive in buying a particular grade, the foreign importer will adjust his price to take care of the risk of loss he might sustain (1). The cost of this risk is ultimately borne by the producer to whom it is transferred by a reduced price. The exporter, receiving

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(1) due to the operation of the Lake Shippers Clearance Association the quality of a shipment, whether average or minimum grade, cannot be ascertained at the time of the sale.



less for his shipments, will, under competitive conditions, pay less for his grain. Similarly, this reduced price is transferred through the various grain dealers to the farmer.

To maintain the quality of export shipments above the minimum, the standard export sample is employed. This sample consists of "3 parts of grain equal to the general average of the grain assigned to that grade..." and "one part of grain equal to the quality of the standard sample of such grade" (1). No principles are violated in the use of standard export samples. The object of their use is to promote uniformity in the quality of the grades exported.

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(1) Statutes, Canada, 1930, c 5, s 31.



## Chapter 11

### RECAPITULATION

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The factors that influence and have influenced the development of grain inspection are many and varied. They have been discussed in relation to their effect on the system as a whole at different periods of development. To make our study more complete they should be related to certain phases of grain inspection over the whole period of our study. The important phases which should be considered are the grades of grain, the inspection service, the settlement of disputes and non-grading activities.

#### THE GRADES OF GRAIN

The changes occurring in the grades of grain during the past 73 years are numerous and varied. They may be enumerated as follows:-

1. An increase in the number of grains graded.
2. An increase in the number of classes and grades of each grain graded.
3. The defining of grades for areas producing different qualities in grain.
4. More complete grade definitions.
5. The addition of commercial grades for grain of low quality or unusual quality.
6. The selection of more uniform standard samples.





The movement of grain into trade channels is one of the factors determining whether or not a grain is to be graded. In 1863 grades were provided only for those grains of commercial importance at that time. At a later date, grades were provided for the grading of flax (1900) and buckwheat (1904). Flax for seed was not extensively grown previous to that date, and buckwheat, while considerable quantities were produced, was of little commercial importance.

A grade conforms to differences in the consumer's preference. The sharper the distinction between grades the more readily will a particular quality of a product find a consumer who will be entirely satisfied with that quality. Grades are more sharply defined by the use of definitions. Many new qualifications have been included in the definitions such as: weight per bushel, moisture content, variety, color, texture, purity and quality factors depending on the use to which the grain was put. This has increased the number of grades, but it gives the consumer a greater range of selection and enables him to choose that which meets with his entire satisfaction. This greater range of selection enables a greater range of discrimination to be carried by the grades to the producer.

Canada's first grain grades were defined in 1863. This step was taken because grain production had reached such a



volume that substantial benefits would accrue from the adoption of grading. In 1860 the total grain production of Canada was between 90 and 100 million bushels. The two most important crops were wheat and oats with a total production of 36 and 45 million bushels respectively. Grades were established for six different grains, and, with the exception of corn, all grades were described by definition.

There has also been an increase in the number of classes of many of our grains. This increase is accounted for by the introduction of new varieties, and by differences produced in one variety by variations in climate. In some cases varieties have fallen off in production, and their grades have been omitted from the statute.

Not only have the individual grades been changed but we have developed several kinds of grades, - statutory, commercial and off grades. The statute of 1863 defined all grades so that all grades were statutory. Statutory grades are difficult to change and often the condition which the change was proposed to remedy had often passed before the change was actually made. In consequence, therefore, there grew up a group of grades which were designed to alleviate temporary conditions. These grades are called commercial grades.



The consumer also desires a uniform product. At first grading was not uniform. Differences existed between the grading of different inspectors, and even the grading of one inspector differed at different seasons of the year and from year to year. Standard samples were introduced to assist the inspector to grade more uniformly. Later the standard samples were selected by one body to produce a greater uniformity of grading throughout the country. Finally, the standard samples were selected by one permanent authority so that uniformity was maintained from year to year.

The changes in the grades of each grain are so numerous that they are more effectively discussed separately.

### Wheat

Wheat was one of the first crops grown in Canada. In terms of value it is Canada's most important crop to-day. Omitting fluctuation attributable to weather conditions its production has been constantly increasing. At the same time as total volume increased, production in different areas of Canada has risen and fallen. The centre of production has gradually shifted westward into regions of different climate producing differences in the quality of the wheat grown. New varieties have been developed to





permit profitable wheat production in areas unsuitable for the older varieties. The shifting of the centre of production has been responsible for many of the changes in the grading of wheat. When grading was first instituted in 1863, the classes of wheat traded were white winter, red winter and spring. A newly introduced variety, Red Pife, was at first discriminated against, but its popularity finally led to its acceptance in the grade classifications. The shifting of the centre of production to Manitoba together with inventions in the milling industry placed this wheat in a premier position with respect to quality.

With the spread of rust and weeds the centre of production shifted from Manitoba to Saskatchewan, but at the same time new varieties were introduced into the former province to meet the rust situation. Kola and durum wheats <sup>large</sup> introduced and grades defined for their grading. With the extension of wheat production into areas of shorter frost free season, a demand grew up for earlier maturing wheats than the old Red Pife. Winter wheats were introduced into southwestern Alberta. Western grades of winter wheat were defined in 1906. Marquis wheat was introduced and replaced its parent as the main wheat variety of the prairies. The grades of hard red





spring wheat were amended to admit of its inclusion into those grades. In later years still other varieties have been introduced and provision made for their separate grading (1). The shifting centre of production has promoted the cultivation of new varieties, and these, possessing different milling qualities, have been responsible for a number of changes in the grade definitions of wheat (2).

In some cases the newly introduced wheat has not lived up to its expectations. Its production has declined, and with its disappearance from trade channels its grades have been abolished. Such wheats are Kota, Red Durum, Canada Hard and Alberta White and Mixed winters. These wheats may still be graded under the commercial grades.

The vagaries of climate have been responsible, not only for the introduction of new wheat varieties, but also for the introduction of commercial grades. Statutory grades are defined by statute and only changed with great difficulty. Frequently, sudden changes in production require the existence of special grades and these are now provided in the commercial grades which formerly were intended to include grades of low quality.

Changes in the grade definitions of wheat have been many and varied. These changes are illustrated in tables

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(1) Garnet wheat.

(2) See chart # 7, appendix.



4 to 12 inclusive (appendix). These tables also show the probable trend of quality as indicated by the grade definitions. A word of caution is necessary in interpreting these trends. They, in part, are based on abstract definitions which to different persons and at different periods may have a different meaning. This point has been discussed elsewhere. These trends do not indicate the trend of quality within a grade as the definition is the minimum grade requirement. When mixing was permitted, the tendency was for the export grades to seek the minimum quality requirement of that particular grade. These trends indicate that the quality of the wheat grades has remained fairly stable.

### Oats

In the number of bushels produced oats, until 1925, was Canada's most important crop. In 1926 it was surpassed in total bushelage by wheat and since then has held second place of importance. The large production of oats is due in part to the relatively high yield per acre and to the relatively low weight per bushel. On the basis of total weight produced the status of the oat crop would be considerably lowered, although it would still remain an important crop.

Oats, however, is of less commercial importance than



wheat due to its limited utilization in industry. As a grain for work horses it cannot be excelled, and it has valuable properties for feeding growing livestock. The human consumption of oats is restricted. During the past decade the trend of oat production has been slightly downward due to the increased use of motor power in both city and farm. This tendency is plainly observed in chart # 3 (appendix).

From 1921 to 1951, only 11.1% of the total oats produced have been inspected (1). The relatively small bulk of oats inspected has had its effect on the statutory grade definitions. Eastern grades, first defined in 1862, have been amended four times in seventy years. Western grades were first defined in 1904 and have been subject to more frequent change due to the more rapid changes of production in a new country.

Changes in eastern grades of oats have resulted in an increase in the number of classes and grades. In 1904 four classes were defined (2). Previously only one classification had been provided. The increase in the number of grades in a class has been derived from splitting up

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(1) See appendix table 5B and chart 3.

(2) See appendix table 13.





of former grades with a slight tendency to lowered quality in 1904.

Changes in western grades of oats have had a tendency to raise the quality of the higher grades and to increase the number of low quality grades. The former tendency is enhanced by the relatively small percentage of the total oat production entering commerce and by the relatively low value per bushel which prevents the distant shipment of low quality. The latter tendency has been due to the place of oats in the cropping system. As a rule oats are not given the preference on clean land. Usually they are grown on land too dirty for wheat, and the crop is consequently dirty. One of the important factors used in defining the higher grades of oats is freedom from foreign matter and other grains. Although definite percentages of foreign matter permitted are given for the first time in 1930, they have existed many years previous to this date (1). The lower grades are damaged oats and contain heavy admixtures of foreign material(2).

#### Barley

Barley is Canada's third most important grain. It is

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(1) See Dawson Richardson Publications Ltd. annual booklet on Western Canada Grain Grades.

(2) See table 14, appendix.



cultivated mainly for animal food, for malting, and to some extent for hay. Its extensive use on the farm restricts the quantities entering trade channels. Between 1921 and 1931, 29.8% of the total production passed through the hands of the trading officials (1).

The increase of barley production has been gradual and in keeping with increased livestock production. Although wheat during the boom years commanded very high prices which tended to specialization in that grain, barley has maintained its position of importance in the cropping system. Barley's use as a late sown crop and as a cleaning crop prevent its extensive substitution by other grain crops.

The effect of barley production on grades has been to increase the number of classes and grades without a general tendency to lowered quality. Since 1925 there has been little change in the eastern grades. Western grades, however, have experienced more change. In 1930 three classes were established, 6 row, 2 row and Two-b. These classes and the lower grades were provided because of the market demands of different industries and countries for particular qualities of barley.

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(1) See chart 2, appendix.



Rye

Rye is a crop which has quite a wide variety of uses. It is utilized for bread, cover crop, hay crop and green manure. The grain is not extensively used for feeding livestock, consequently, when grain is harvested most of it finds its way into trade channels. During the period of 1931-1961, 61.5% of the total production was inspected (1).

Changes in the rye grades have been infrequent. With an increase in production, eastern grades have increased in number by splitting up former grades with no apparent lowering of quality. Western grades have followed the same tendency, but the additional grades have been obtained by dividing those of lower quality.

Peas

The limited use of peas has inhibited large or rapid increase in production. As a human food only small quantities are consumed. Peas can seldom be used alone for stock feed on account of digestive troubles which they cause. For most classes of livestock, peas should be fed in combination with some other feed. These factors have restricted pea production although it has been grown for many years. Another factor tending to decreased production

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(1) See table 55 and chart 4, appendix.



is the prevalence of the pea weevil which so seriously affected the yield that pea production became unprofitable. The Canadian production of peas now amounts to only 11 million bushels (1). Prairie production runs about 20 to 40 thousand bushels, and in the past six years none has been inspected (2). Inspection of peas is also quite light in the eastern inspection division. In 1926, 10,560 bushels were inspected, and in 1931 only 1000 bushels (3).

The changes in the grade definitions have been few in number (3).

Changes resulting from production have been due to an increase in the number of classes of peas grown. Until 1904 grades were defined for only white peas, but in that year grades for marrowfat and mixed peas were added. Grades for peas were first defined in 1905. Pea grades were omitted from the inspection acts from 1873 to 1905. Other changes in pea grades have resulted from attempts to improve grade definitions. Insect damage was made a factor in grading in 1905, and weight per bushel in 1912. <sup>special</sup> Un~~der~~ grades have been provided for the western inspection division.

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(1) See table 54, appendix.

(2) See table 50, appendix.

(3) See table 19, appendix.





(1990)

### Corn

Corn is one of Canada's oldest crops. During the early settlement period, it was used as a substitute for wheat when the latter crop failed, but now it is used chiefly as a feed for livestock. In 1860 Canada produced 2½ million bushels of corn (1). By 1900 the total yield was in excess of 25 million bushels. Since the beginning of the century, production has decreased until now it is approximately five million bushels annually. Three-fourths of Canada's corn acreage is now devoted to the production of fodder corn.

Although grading was provided for corn at a very early date, it is not a crop which is handled very extensively in commerce. Most of our corn is consumed on the farm and consequently, only a small proportion of the total production is officially graded. In the last eleven years, less than 100,000 bushels of Canadian corn have been inspected, and yet our total production for the same period has been almost 100 million bushels (2).

Corn production in Canada is centered in Ontario. Small acreages are found in the prairie provinces where it has been recommended as a summerfallow substitute and

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(1) See table 57, appendix.

(2) See table 51, appendix.



a cleaning crop (1). It is not a crop that is particularly well adapted to the prairie climate, consequently, its production has tended to decline. Fifty-five thousand bushels have <sup>been</sup> graded in the western inspection division between 1919 and 1927, and none since 1928. No special grades are provided for corn of western production.

Grades for corn were named in 1865, but not defined until 1873. Until 1904 only one grade was defined for each of white and yellow corn. Lower grades of these classes fell into the mixed grades. In 1904 three grades were defined for both yellow and white corn and two grades for mixed corn. The moisture content was added as a factor in the definitions in 1912, and the weight per bushel and more specific qualifications added in the 1930 definitions (2).

Corn has been the most backward of all our graded grains in receiving rigidly qualified grade definitions. This condition is explained by the relative unimportance of Canada's corn crop in the grain trade. In some years considerable quantities of corn are imported from the United States for feeding purposes.

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(1) About 2800 acres were sown in 1920. No separate returns of corn acreage are given in the 1921 Yearbook for the prairie provinces.

(2) See table 20, appendix.



Flax

The establishment of flax grades is one of the developments of the settlement of western Canada. Census returns prior to Confederation do not report the production of flax for seed although flax fibre production is reported at a very early date. Separate returns for flax seed production do not appear in the census reports until 1891 although small quantities of seed were produced at a much earlier date (1). It is not known whether this seed was produced for the purposes of seeding or the manufacture of linseed oil. In 1890 only 14,236 acres were sown to flax for seed from which 136,844 bushels were harvested (2). By 1900 the flax acreage had increased to only 23,686 acres. A rapid expansion of flax production occurred in the first decade of the present century and reached a peak in 1912 with over two million acres and a production of over 26 million bushels (3). The great increase in flax production occurred with the opening up of Saskatchewan (4). In 1900 Saskatchewan had less than 1% of the flax acreage of Canada, but by 1910 that province accounted for over 87% of the Canadian total. In the same

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(1) See table 54, appendix.

(2) See tables 56 and 57, appendix,

(3) See table 38, appendix.

(4) See table 42, appendix.





years, acreage for the Dominion increased from 23,086 to 582,185 acres.

The sudden increase of flax production in western Canada is due to two factors - the market demand and the adaptability of flax to pioneering conditions on the prairies. "Flax in North America is grown almost entirely for its seed"(1). "Although linseed oil is used to some extent for food in Russia and India, its sole use in America is industrial. Its drying properties make it a convenient binder in many preparations, such as paint, varnish, linoleum, oilcloth, patent leather and printer's ink....America is the world's largest user of linseed oil. Due to the abundance of our forest reserves, frame buildings are more numerous and the use of paint is more common than in any other country. In recent years the combined linseed crops of the United States and Canada have several times been insufficient for domestic needs"(1).

Flax is a shallow-rooted crop and is easily crowded out by weeds. It is subject to disease when grown continuously on the same land. For these reasons it does best on newly-turned prairie sod, and it is a common pioneer crop of the prairie. It can be sown late in the season, and a new settler, during his first year of settlement,

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(1) Whitbeck and Finch, Economic Geography, p 82.



may devote a greater acreage to flax than to any other crop.

Commodity inspection has certain financial advantages, but, unless the grades can be assembled quickly in commercial quantities, the benefits from grading will be nullified by increased handling charges. It is essential, therefore, that a sufficient volume be produced before grading will be financially successful. The small volume of flax produced during the 19th century delayed the establishment of grades in that commodity until 1900. The grades then established were in response to the increasing production in the west. No special grades are provided for flax grown in the eastern inspection division.

Although the volume of production was small when flax grading was instituted, nevertheless, it apparently was sufficient to benefit the producer by the adoption of grading. Unlike some of the grains graded, flax is essentially a cash crop as is indicated by the proportion of the total production inspected(1).

Grades for flax were first defined by statute in 1900. The changes in the grades during the past 34 years are the result of changes in production rather than changes in the consumer's preference. There has been a rise and fall in the volume of production and a reduction

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(1) See chart E, appendix.



in quality. The reduction in the quality of flax grown in western Canada is indicated in the changes occurring in the statutory grade definitions (1) and is due to the extension of production into areas less adapted to its cultivation. Since flax is commonly sown late, its harvest is late, and it is subject to damage from frost. It is also subject to disease when grown continuously on the same land.

Some of the changes in the grades of grain have been in response to changes in production, but, at the same time, grades are defined according to differences in the consumers' preferences. These two statements may appear contradictory and warrant further explanation. There are four kinds of change in grades;- the addition of qualifying factors to the definition; the rearrangement of the definitions of a group of grades; the addition of new grades to a group of <sup>existing</sup> grades; and the addition of new classes or groups of grades. The addition of qualifying factors to the definition more sharply mark the line of division between grades and brings greater uniformity to the grading. This change is in response to the consumer's preference for uniformity of grades. The rearrangement of the definitions of a group of grades establishes a new classification. Both the old and the new classifications

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(1) See table 32, appendix.





are based on the consumer's preference. In establishing a classification, the different grades should be available in commercial quantities. If changes in production so alter the quality of the crop that one or two grades are not available in commercial quantities, then a change in the classification is warranted. This change may take the form of abolishing certain grades or may involve the rearrangement of the line of division between grades. In any event the new classification is based on the consumer's preference. The addition of new grades to an existing classification permits the consumer to exercise a greater range of selection. This change may involve the whole or only part of the classification. Changes in production which greatly increase the volume of grain whose grade or classification exhibits a wide range of quality warrant a reclassification based on the consumer's preference to permit a greater range of selection. The addition of new classes of a grain permits the consumer a greater range of selection from the range of quality which may have increased as a result of changes in production. For example, the cultivation of Garnet wheat was a change in production. Garnet increased the number of qualities available in wheat. The separate grading of Garnet segregated the Garnet qualities from the qualities of other wheats. The





distinguishing feature of the new class was based on the consumer's preference.

The changes in flax grades have occurred in three stages: in 1904 an increased percentage of damaged seeds was permitted in the various grades; in 1912 the weight requirement was reduced; and in 1920 a new low grade was defined and heat damage was permitted in two grades(1). The weight requirement for all grades of flax is lower than the legal weight per bushel and probably represents what a measured bushel of a particular grade of flax should or does weigh. The legal weight per bushel of flax was raised from 50 to 56 pounds in 1896 to conform to the standard adopted in other countries. In 1912 the weight requirement of flax grades was lowered on account of shrinkage and drying making it difficult to secure the weight required in the grades previously defined (2)

### Buckwheat

Although a comparatively old crop in Canadian agriculture, the slow increase of buckwheat production and its cultivation for farm consumption have delayed its official grading and promoted little change in the statutory grade definitions. When agricultural statistics were included in the census, buckwheat was one of the first crops whose production was reported. Buckwheat, however,

(1) See table 28, appendix.

(2) Mansard, 1912, p 3176.



is a crop of minor importance. Since very early times its production has been below that of wheat, oats or barley, but until 1920 it has exceeded that of rye.

Buckwheat is produced for farm consumption rather than for industrial utilization. It is grown more extensively in the mixed farming areas where it used as a feed for live stock and as an improver of run-down soils. In 1932 Ontario and Quebec produced over 86% of the buckwheat grown in Canada. These areas practice a more<sup>or</sup> less stable form of agriculture in which live stock plays an important part. The maintenance of soil fertility is an important consideration in the agriculture of these provinces. In recent years the tendency has been to grow feed crops, utilize those crops in the feeding of live stock and return to the soils as much as possible of the elements removed by the crop. Buckwheat has a place in such a system of farming. The swing to live stock production has been favored by the competition from cheap fertile prairie soils forcing eastern farmers out of specialized grain production. The change from grain to live stock production is slow but accompanying it is an increase in the production of feed crops. Buckwheat production has been favored by this change in type of farming. It has also been favored by the decreased production of two other eastern feed crops, peas and corn. Buckwheat production has increased slowly and



steadily.

The losses from rust, weeds and soil depletion in Manitoba in recent years have induced farmers of that province to engage more extensively in mixed farming. Buckwheat was one of the crops introduced as a feed crop, but it has not gained a strong foothold. The prairies are naturally adapted to grain farming, and every effort will be made to continue in grain farming as long as possible and profitable. Durum wheats and new varieties of common wheat have been introduced to avoid the rust hazard. New methods of tillage have been devised to combat weeds. The use of commercial fertilizers has been favorably received and promises to become an established practice. The introduction of increased live stock production in certain parts of the prairies has been delayed, consequently, certain feed crops are little grown. In Manitoba the acreage sown to buckwheat has declined from 16,000 acres in 1926 to 5,700 acres in 1933. Practically no buckwheat is grown in Saskatchewan or Alberta.

In anticipation of increased production in Manitoba, western grades were provided for buckwheat in 1927. Fifty cars were inspected from the 1924 crop, but for the years 1928 to 1931 inclusive only eleven cars received official grading. The quantity of buckwheat grown and inspected in western Canada at the present time does not warrant the





existence of special grades for it, yet it is interesting to note that the grades for western buckwheat are more rigidly defined than for eastern Canada (1). The most plausible explanation of this seems to be that more attention has been paid to western grades and that care and completeness of definition have extended to all western grades. The changes in defining buckwheat grades have been very few and occurred in 1930. Changes have not been the result of production but of changes in method of definition(2).

### THE SETTLEMENT OF DISPUTES

The principles governing the settlement of disputes adopted in 1795 have been maintained with very little change up to the present time. Disputes over grading are referred to an appeal board whose decision is final. The chairman of the appeal board is a government official who calls together other members of the board when necessary. Formerly this duty was performed by a Justice of the Peace who did not act personally on the board. In place of each disputant naming members of the board, members are now appointed by the government. Producers and grain companies are both represented on the board.

In addition to the appeal board, grades may now be changed by the inspection department. Grading is usually

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(1) See table 21, appendix.



performed by a deputy. If his grading is questioned, the sample may be referred to the inspector who has authority to change the grade. A request may also be made to secure a new sample at unloading, and that sample used as a basis for grading. In this case the grade may be changed at the point of unloading, or at the original inspection point before submission to the appeal board.

#### THE GROWTH OF THE INSPECTION SERVICE.

An inspection service comprises the officials and the work they perform under an inspection act. The central figure in a grading system is the inspector. It is he who inspects and grades the commodity, and it is around him that the whole inspection service is built up. At one time the inspection service contained only inspectors, although an appeal board was temporarily appointed from time to time to settle disputes. The inspector performed all the work involved in commodity inspection except the settlement of disputes. As the volume of inspected commodities increased, and as increased production necessitated improvements in the inspection system, various officials were added to the service from time to time. Some of these have relieved the inspector of some of his duties, others have been placed in control of him.

The board of examiners was appointed to pass upon the



qualifications of inspectors. A standards board selected a set of standards more uniform than he could do alone. He came under the supervision and control of a chief inspector, warehouse commissioner, and board of grain commissioners. The weighing of grain, which he formerly performed, is now handled in another branch of the service. Much of the work formerly falling to the inspector is now performed by assistants. In the modern grain inspection office to-day, samplers collect and bring the samples to the office, a clerk writes the certificates, and a helper prepares the sample for grading. The actual work of grading is performed by a deputy who works under the personal supervision of the inspector.

#### ADMINISTRATION OF INSPECTION ACTS

It has been rather difficult to obtain definite data on what minister or department of the government was responsible for the administration of early inspection acts. After Confederation the practice was adopted of naming, by order-in-council, a certain minister of the government to administer particular statutes, but, his decisions were made in the name of, and presumably in conference with, the Governor-in-Council. This policy was continued until it became necessary for the government to assume more direct control over inspection services. This step threw such a





volume of business on the Governor-in-Council that it became necessary for crown ministers to more directly administer certain statutes and resulted in naming in the act the minister, instead of the Governor<sup>Y</sup>-in-Council, to administer the act. With the increase of departmental business resulting from a greater extension of services and governmental control, it has further become necessary to delegate the administration of certain statutes to civil servants. In the latter situation the minister and the official have both been named in the act.

An order-in-council passed on July 8, 1873, named the Minister of Inland Revenue to administer the General Inspection Act. Although the Department of Trade and Commerce was created in 1887, it was not until 1901 that the minister of that department was charged with the administration of acts relating to grain inspection. The administration of these acts now rests with the Minister of Trade and Commerce but has been delegated to the Board of Grain Commissioners.

In 1895 a chief inspector was appointed, but he was not given full control over the grading system until 1901. The chief inspector in 1899 and inspectors in 1901 became government officials whose salary was paid out of government funds. The chief inspector has continued in charge of the grading service until the present time.





## Chapter 18

### FACTORS INFLUENCING GRAIN INSPECTION.

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From the foregoing review of the development of grading the various classes of grain, we may now proceed to a discussion of the factors affecting grain inspection. These may be classified as follows:-

1. Ecological.
  - (a) Population.
  - (b) Agricultural technique and production.
  - (c) Marketing technique.
2. Social Interaction.
  - (a) Producers.
    - i. farmers
    - ii. the milling industry
    - iii. the grain trade
  - (b) Consumers.
    - i. internal
    - ii. external
  - (c) Regulators.
    - i. government
    - ii. Boards of Trade
    - iii. boards of inquiry.

#### Population

The influence of population on grain inspection is so closely associated with that of other factors that it has been difficult to segregate in a pure form. Population has exhibited certain characteristics on which other factors are based. It forms the basis of production, consumption and trade.



The movement of population to this continent promoted the development of North America. This movement was initiated by the call of cheap virgin land, independence and financial security. The demand for the necessities of life promoted the adoption of agricultural pursuits. As the movement grew it occupied the interior plains and made this continent one vast productive region. Not only did this movement bring people to this continent, it also brought their civilization - their industry, habits, customs and institutions. These people and their civilization had to be adapted to the environment of their new home. The development of one part of that civilization, the grain inspection system, is the subject of our study.

### Production

Agricultural production resulting from the movement of population to this continent is one of the most important factors affecting grain inspection. The influence of production on grain inspection has operated chiefly through the grade definitions. Grain production is partly dependent on the utilization or consumption of the crop, but we wish here to confine our attention to ecological considerations.

The agricultural settlement of the West was favored by the comparative advantage enjoyed by the great plains



2. region for the production of cereal grains. Prairie lands were fertile, cheap and easily brought under cultivation. The topography of the country permitted the use of large machinery which, together with high yields and low priced land, made a low cost of production. The climate of the region was favorable for the production of high quality wheat. Aided by cheap transportation, the great plains area was able to successfully compete in grain production against less favored areas lying closer to the consumer market. As a consequence, grain production increased in the great plains and declined in the eastern half of North America and in parts of Europe.

The production of grain crops is influenced by the character of the climate in which they are grown. As the tide of migration swung westward, new regions with differing climates were successively opened up for settlement. Crop production in the new area was governed by different combinations of economic and ecological factors. Wheat, being a pioneer's crop, was produced in large quantities in all the new regions. At the same time wheat production in the older regions declined due to the adoption of other crops found to be more profitable under the changing conditions. As a result we have had a gradual movement westward of the centre of wheat production. This same tendency is exhibited in the production of other





grains although not to the same extent as with wheat.

The movement westward of the centre of grain production has accounted for many changes in the definitions of grades. Climate has a marked effect on the quality of crops. The shift of the centre of production from Ontario to western Canada was from a humid to an arid and semi-arid region. This change of environment affected the quality of wheat produced. New varieties were grown to cope with new climatic conditions. When these came on the market grades were provided for them. The quality of wheat, more so than any other grain, is governed by its climatic environment, and the grades of wheat have been subject to frequent revision. In no other crop has variety played such an important part in grade definitions.

The movement of the centre of production has been responsible for the increased production of some crops and for the decreased production of others. Flax was not extensively grown until the opening up of the west with conditions favorable to its cultivation. Corn production failed to move westward with the shifting centre of grain production into western Canada. The cool nights of the prairies are not conducive to heavy yields of corn. Oats, barley and rye now have their centre of production in the west.

Climate has also affected the number of grades in



the different classes of grain. Commercial grades were provided in 1891 for grain injured by climate. The lower grades of oats are those damaged by frost. Climate is responsible for the inclusion, in both statutory and commercial grade definitions and classes, of the terms tough, damp, frosted, heated, sprouted, feed (oats), commercial and rejected. Other terms incident to climate are smutty, rusted and special (wheat 4, 5 and 6).

Another production factor in addition to climate has influenced grain inspection. This factor is production technique. When the centre of grain production moved from Ontario to western Canada, threshing moved from the barn to the stack, to the stack and now in many cases to the combine. While perfectly justified on economic grounds, this change in threshing methods has resulted, in some years, in the marketing of large quantities of tough and damp grain. Grades must be provided for such grain. The rapid increase of production during the early years of settlement suddenly threw large quantities of grain on the market in a very short time. The congestion of handling facilities encouraged the introduction of modern grain elevators. In recent years the motor truck delivers grain so rapidly to the elevators that handling facilities are again congested. The solution to the present congestion has not been found.



Agricultural practices have also been felt in the grain inspection system. The choice of varieties of poor milling and baking quality, the mixture of varieties, grains and weeds, and the failure to control disease have all necessitated amendment and an increase of grades. Wheat production in Ontario has fallen off because of the prevalence of an insect pest. Wheat grades contain qualifications for freedom from worm eaten and buggy wheat. Restrictions on ergot in rye have considerably increased in recent years.

#### Marketing Technique

Grain inspection is a part of our marketing system. Commodity inspection, from which it developed, originated as the result of the practice of fraud easily perpetrated and not readily discovered because of the use of certain marketing practices. Commodities were shipped in barrels. Inspection originated to detect adulteration.

Since grain grading was inaugurated, one of the important changes in marketing technique has been from sack to bulk handling. The handling of grain in bulk is greatly facilitated by the existence of grades.





The Farmer's Influence on Grain Inspection.

The influence of the farmer on grain inspection in Canada has been both individual and collective. Acting individually, his self-interest has promoted an adjustment of his production program to secure the greatest profit for himself. He has adjusted his farming operations to the various types of enterprise, classes of crop and variety of grain according to the needs of the day. During the early years of his settlement throughout all parts of Canada, he became interested in the production of wheat because that crop, to him under his conditions, was the most profitable to grow. As his community grew older, other forms of farm enterprise became more profitable, and wheat production in his region declined. History may repeat itself in certain sections of western Canada. The farmer, through his choice of crops, has accounted for the rise and fall of flax production in western Canada, and the changing trends in all classes of grain. He also adjusts his farming activities according to the most profitable variety of grain to produce. The profit motive induced him to grow varieties discriminated against on the market, such as the Fife wheats in 1873, Garnet wheat to-day and a host of other varieties.

While the influence of the farmer acting individually





has been almost entirely upon production, his influence collectively as a farmer's organization has been directed towards marketing. During the early years of the present century, farmers believed they were the victims of fraudulent and discriminatory practices in the grain trade and organized farmer's organizations to seek redress. They have requested and secured, either directly through their own efforts or indirectly through the recommendations of grain inquiry commissions, changes in legislation affecting grain inspection. They have formed their own commercial organization to compete against private corporations against whom they had a grievance. Collectively, their influence on the grain inspection system has been to bring to the attention of our legislative bodies those imperfections of the system as they affect the producer and to suggest changes for its improvement.

The preference for a commodity or any particular part of it originated from the consumer. In the case of bread wheat, this person is the housewife. The miller, interpreting the consumers' wants and manufacturing to supply the consumer market, discriminates between wheats having different milling and baking properties. These preferences have been the basis for defining and classifying the grades of wheat. Previous to 1870, when the old burr stone mills were still in use, the white winter wheats yielded more flour of a



higher quality than other groups of wheat on the market. The miller's preference for white over red wheat is reflected in the higher prices paid for these wheats and also in the grades defined in the inspection act of 1873. The introduction of the purifier in 1870 and the roller mill in 1875 provided the miller with machinery which enabled him to manufacture the desired quality of flour from wheats which formerly produced only a low grade flour. The change in milling methods resulted in a change in the miller's preference for various wheats and was reflected in the inspection act. The influence of the milling industry on grain inspection has been to register the consumers's preference for a white loaf and the miller's ability to satisfy that want with the wheat and machinery available to him.

#### The Grain Trade

The grain trade may be said to comprise all those individuals and corporations directly or indirectly interested in the marketing of grain. The grain trade is the channel through which grain is carried from the producer to the consumer. Those engaged in the business, naturally, seek a profit on their operations. Competition, however, is keen and advantage must be taken of all those methods and practices which will enable them to secure



a profit on their services.

Many practices and methods in the grain business which were the natural outgrowth of circumstances at the time of their origin developed to a form which injured the producer. We still have with us individuals whose self-interest is not governed by moral considerations. Some of these have been engaged in the grain business. Fraud has been practiced in the handling of grain. Our grain inquiry commissions have not found it nearly as prevalent as had been supposed.

Many of the regulations in the grain act have arisen as the result of the elevator monopoly during the early years of settlement in western Canada. However justified the C.P.R. were in granting a monopoly to encourage the introduction of standard elevators, the monopoly at a later date appeared to work unjustly against the farmers. The monopoly was broken, and in the fight for its retention it became necessary to enact legislation concerning flat warehouses, loading platforms, car distribution and the car order book.

Another practice criticized was that of mixing in terminal elevators. Farmers and others believed that the quality and consequently the price of grain was lowered to the disadvantage of the farmer. It was many years before it was realized that while mixing did slightly lower the





quality of the upper grades it also provided an increased demand for and raised the price of the lower grades.

While some of the practices developed in the grain trade discriminated against the farmer and necessitated legislation governing them, at the same time, practices have been developed which have increased the efficiency of marketing, decreased the spread in price between the consumer and producer, and benefited the farmer. The use of machinery in handling grain, the practices of hedging, telegraphic and radiographic communication of price changes, mixing, the organization of grain exchanges and recommendations for the improvement of the grading system have all helped to reduce the middlemen's costs to the benefit of the producer.

The grain trade has been responsible for making our grain marketing system as efficient as it is. While some of the methods have been questionable and have necessitated regulation, on the whole it does not warrant the lack of respect many hold for it. The influence of the grain trade on the inspection system, in addition to developing methods and practices requiring regulation, is to interpret the foreign consumer's preference and demand for certain grains and certain qualities of grain. This interpretation together with that of the miller is reflected in price and ultimately leaves its mark on the grade definitions.



Consumption.

Another factor of importance in the development of grain inspection is that of consumption. It acts directly on the system itself and also indirectly through production. Since grades, together with price, are the means of projecting the whole range of the consumer's preferences toward the producer, the consumer's preference and changes in it will have an important influence on the grades.

The consumer's demand for the various grains has varied during the seventy years of grain grading. With respect to the utilization of Canadian grown grains, consumers may be divided into two groups - those who produce as well as consume grain, and those who consume but do not produce grain. From the latter group has originated the greatest part of the demand for flax, wheat and rye. The former group have created most of the demand for oats, barley, peas, corn and buckwheat (1). During the past 75 years the production of wheat, oats, barley and buckwheat has been one of steady increase. Lin production remained fairly constant until 1916 when it took a sudden rise due to its use as a substitute for wheat on the arid lands of southern Alberta and Saskatchewan. The peak of production was reached in 1922. Production continued to fall off until 1925 when it rose again to another peak in 1930. Corn production reached its peak in

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(1) See table 55, appendix.



1901 and has since gradually fallen off. The production of peas was fairly constant from 1880 to 1900, but in the last twenty years it has gradually declined. Flax production was quite small until the beginning of the present century. It increased gradually and then took a sudden jump to reach a maximum in 1912. Since then production has fluctuated violently but on the whole has had a tendency to decline. The fluctuation in the production of corn, rye and peas has been due to changes in its utilization by the consumer who in this particular instance also belongs to the producer group. The production of flax has fallen off due to ecological factors.

The consumption of grain acting through the factor of production has been responsible for the rate of change in the grades of our grains. Those grains for which there is a strong demand have had their production increased rapidly and their grades changed frequently. The production of grains with weaker demand has increased less rapidly, and the changes in the grades have been fewer. The tendency for the rate of change in grade definitions to follow the rate of change in production is brought out in the grade definitions of the two inspection divisions - eastern and western.

In addition to acting indirectly through production,





consumption also directly influences grain inspection. In this instance the influence is between the different qualities within a specific grain and not between grains. The consumer's preference has been translated and written into the grade definitions. There is little evidence that the ultimate consumer's preference has changed. He still wants flour that bakes into a white loaf. His demand for porridge oats may have decreased due to the increased use on prepared breakfast foods. The preference of the intermediate consumer, the miller, the baker and the brewer has changed. The use of improved milling methods has changed the miller's preference for wheats, but he still manufactures a flour that bakes into a light white loaf. Research in the baking industry has created a preference for wheats and flours possessing high water holding capacity and great baking strength. Research has shown the importance of the scutellum in malting, and, by pointing out the advantage of the broader and larger scutellum in the kernels of 2-row barley, developed the brewer's preference for this type of barley. These changes are the basis of modifying grade definitions.





### The Development of Trade Regulation

Canada, the United States, Australia and Argentina are all large producers of grain, but only the first two mentioned countries have well developed grain inspection systems. Why, may we ask, did grain inspection develop in North America and not in the Southern Hemisphere? The answer to this question reveals the presence of an important factor essential to grain inspection. Since the inspection of grain was not initiated until, <sup>after</sup> that of other commodities, we may assume that grain inspection was an extension of the idea of commodity inspection to grain. Also, since commodity inspection commenced at an earlier date in the United States than in Canada, we may well look to the former country for the answer to our question.

The above four mentioned countries have all large areas suitable for the production of grain, all are comparatively new, and all are sparsely populated. But there, so far as our present study is concerned, the similarity ends. The early agricultural production differed in the two areas. In North America a self-sufficing form of mixed farming was practiced because poor transportation facilities prevented any great exchange of commodities, and the difficulty of removing the heavy forest covering prevented the extensive utilization of land. Settlement in the



Southern Hemisphere was assisted by railways and occurred on grass lands which encouraged specialized production in the form of ranching.

Up to the middle of the last century only the eastern half of North America was settled. This area, whose western boundary was approximately 1000 miles from the Atlantic seaboard, was settled before railway transportation was introduced. As the forest growth which covered this area could not be removed rapidly, there was a tendency on the part of farmers to make an intensive use of their cleared land. This involved the growing of crops as opposed to ranching. Transportation facilities were very inefficient and expensive, and encouraged the production of as many as possible of the farmer's needs either on the farm or in the vicinity where consumed. Surplus production was forwarded to market. Inefficient and expensive transportation also necessitated the concentration of value in the farm product. Flour mills followed the extension of wheat acreage, and wheat was usually milled into flour near the area where grown. Livestock was marketed as beef and pork packed in barrels. Hides were exported from the community as leather. Pot and pearl ashes, a bye-product from the burning of the forest growth, was refined and exported in barrels from the community where produced.



One of the outstanding characteristics of farm products produced during this early period is that many of them reached the central market packed in barrels. This form of container was necessary to protect the product from damage during transportation to market. The influence of transportation on the manner of shipping is brought out in the writings of early writers. Farm commodities were shipped in barrels and sold by the barrel. Although it was understood that a barrel should contain a certain quantity, such standard was a trade practice and not a law. Dishonest persons, therefore, could without legal liability put less in a barrel than was the customary trade practice. Such fraudulent practice, short-weighting, did develop during the early settlement of both Canada and the United States. The buyer, to protect himself against such fraud, made due allowance for short weights or traded elsewhere. The foreign buyer apparently did trade elsewhere for we find the governments becoming concerned with the loss of this trade. Governments then, as now, are interested in the development of foreign trade, and made regulations seeking to protect that trade. Since trade was falling off as a result of fraudulent practices, the policy pursued by the government was to prevent the exportation of fraudulently packed or adulterated commodities. To do this it was necessary to adopt some means of inspection. It is this





inspection that was the beginning of commodity inspection and grading.

The conditions surrounding the early settlement of North America did not exist in either Argentina or Australia. Both had a comparatively narrow strip of forest along the coast first colonized, but sided by the railways settlers passed by this area in favor of the grass plains of the interior. The early type of agriculture followed was ranching, and the products exported were wool, hides, dried meat and meat extract. Such products, with the exception of the last named(1), were not shipped in sealed containers and did not require a system of government inspection to detect fraud. The important era of settlement in both countries occurred with or after the introduction of railways. With this superior means of transportation, as compared to that existing during the early settlement of North America, there was a tendency to export raw rather than finished products whose method of shipment and ease of adulteration led to the adoption of government inspection in North America.

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(1) Meat extracts were produced in a few plants, as compared with the number of flour mills in North America, and many of the plants were under the control of firms in Europe. Adulteration under such conditions was less likely to occur as the perpetrator of the fraud could be more easily located and there would be less inducement for a subsidiary plant to defraud its parent concern.



We have just seen that commodity inspection arose as the result of an attempt to overcome fraud. In all probability <sup>inspection</sup> it originated in North America. Commodity inspection, however, is but one form of trade regulation, and trade regulation originated in the dim and distant past, and has been extended in many different directions. When it became necessary to regulate the marketing of commodities, it found expression in inspection acts, weights and measures acts, and sales acts. Trade regulation is continuing to expand for at the present time we hear of tariffs, trade agreements, quotas, price control and acreage reduction. Within the grain trade, trade regulation has also expanded. At first it was confined to grading, but now it includes all those matters relating to the handling of grain. The development of the grain inspection system is dependent on the development of trade regulation because what it attempts to accomplish is the regulation of trade.

Trade regulation may be effected by various organizations, but in the early development of North America it was assumed by the government. It is true that trade regulation in the form of inspection was inaugurated during the early history of the city of New York by the millers and merchants of flour. Their authority, however, was only local and was



disregarded outside the limits of New York. Since the regulation of trade does oppose the satisfaction of individual self-interest, it must, to be effective, originate in an authority which has jurisdiction over all individuals.

It is true that a voluntary association may institute trade regulation, but it lacks authority to compel its members to adhere to its edicts. Membership in an association, although it may be advantageous to the individual, is purely voluntary. If membership is not advantageous to the individual, he may withdraw from and cannot be compelled to join and accept the regulations of the association. To be effective trade regulation which embraces a state, province or nation composed of individuals in numerous walks of life must emanate from the government.

#### The Boards of Trade.

The influence of the Boards of Trade on grain inspection is now confined to an advisory capacity. In the past, however, their influence extended to an administrative capacity as well. It was the Board of Trade or Chamber of Commerce who first advocated state controlled commodity inspection in New York, and who advocated commodity inspection in Canada. During the early years of commodity





inspection they were intrusted with its supervision, and they introduced many methods and practices which have continued in use until the present time. Their influence on inspection during its formative years was due largely to the absence of other organizations and to the government's abstention from business enterprise. When grain inspection grew beyond local control, the Boards of Trade failed in their administration of it.

#### Grain Inquiry Commissions

Numerous complaints have been lodged at various times against practices and conditions in the grain trade. Most of these complaints have originated from farmers, but some have come from various branches of the grain trade. Along with these complaints have been requests for legislative changes to remove the cause for complaint. Some complaints have resulted in direct legislative changes, but those complaints involving drastic changes have been referred to a commission for investigation. During the past 35 years the grain trade has been subject to the scrutiny of numerous commissions. The recommendations of these commissions have been the basis for amending the grain act. The influence of grain inquiry commissions has been one of interpreting the changes necessitated in the growth and development of the grain inspection system.





## Chapter 17

# A COMPARISON OF CANADIAN AND FOREIGN GRAIN INSPECTION SYSTEMS

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Numerous commissions investigating conditions and practices in the Canadian grain trade frequently have been referred to and have studied at first hand grain inspection in foreign lands. Their studies have been pursued in the hope of finding some practice which they could recommend for adoption in Canada, but in recent years they have reported favorably on the superiority of Canadian methods. The Royal Grain Inquiry Commission of 1925 summarized British opinion of grain inspection in Canada in very complimentary terms.- "The Canadian system of handling and exporting grain is considered by importers and bankers, and the trade generally, as being the best in the world - most expeditious, most economical." (1). The Saskatchewan Royal Grain Inquiry Commission of 1928 after comparing Canadian with foreign grain inspection conclude,- "It is evident that Canada has nothing of profit to adopt from the grading systems of even the most advanced wheat producing and wheat exporting countries which constitute her severest competition" (2).

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(1). Rpt. Royal Grain Inquiry Commission, 1925, p 189.

(2). Rpt. Sask. Royal Grain Inquiry Commission, 1928, p 106.



While a review of foreign grain inspection systems may reveal very little which can be incorporated profitably in our own system, nevertheless, it may be employed to confirm some of the principles evolved in the study of grain inspection in Canada. Differences in the factors affecting inspection will, of course, result in differences in the inspection systems influenced by those factors, but there are certain fundamental principles underlying inspection which are common to all systems. A knowledge of these principles and the ability to employ them in evaluating "foreign introductions" will assist us materially in directing the future development of our own system which is essentially dynamic. It is with this purpose that a review of foreign grain inspection is undertaken.

Grain inspection systems may be classified into two groups depending on their origin. In Canada and the United States, both grain exporting countries, grain inspection was instituted by the producer or the producer country, while grain importing countries developed inspection to protect their consumers. The origin of grain inspection provides us with two types of systems, producer and consumer. In both types the consumer's preference is of paramount importance since commodity inspection is a



means of trade regulation which facilitates the transfer of the consumer's preference to the individual producer. Both types of inspection are accepted by all parties concerned. The grades determined by the Canadian grain inspectors are accepted in consumer countries because those grades are based on the consumer's preference. A producer's system must consider the consumer's preference otherwise the consumer will not accept the producer's inspection, and the system will have little value in transferring the consumer's preference to the producer. Consumer's inspection systems extend to producing countries - the f.a.o. system of England is used in the purchase of grain in Australia and the Argentine. Both systems are alike in one respect - they facilitate the transfer of the consumer's preference to the producer - but they differ considerably in method. The producer's system is the more complicated because it aims to carry a wider range of the consumer's preference to the producer.

#### THE UNITED STATES

Grain inspection in the United States is very similar to that found in Canada. This similarity is due largely to the adoption in Canada of methods and practices developed in the United States during the early years of inspection and to the similarity of the development of





the two countries. Commodity inspection originated in the United States and was subsequently introduced into Canada. Our early inspection acts appear to have been drafted from similar acts of the United States. The New York standard samples of flour were used as a basis for flour grading in Canada until as late as 1860. The Minnesota grades of hard red spring wheat were used as a basis for defining grades of similar grain in our General Inspection Act of 1885 (1). In 1900 the Royal Commission's recommendations adopted in the Manitoba Grain Act were the result of a careful study of grain trade regulation practiced in Minnesota and the Dakotas (2). These and many more instances indicate the similarity and close relationship between the grain inspection systems of the two countries.

Although grain inspection in Canada and the United States is similar in many respects, there are certain fundamental differences between the systems of the two countries. The control of grain inspection in Canada is vested in the Dominion while in the United States it is divided between the federal and the various state governments. In the United States a controversy has existed for many

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(1) Hansard, 1885, p 1207.

(2) Rpt. Royal Commission 1900, Sessional papers, 1900, # 81 (a), pp 6-12.



years between federal and state governments over the authority to regulate commerce. The commerce clause of the constitution would seemingly give the federal government authority to regulate commerce, but, where this authority has not been exercised, the states, whether rightly or not, have assumed this power and strive to retain it (1). Until 1916 the grain grading system, or rather systems, of the United States were under control of various state governments and Boards of Trade. These organizations had their own inspection systems, appointed their own inspectors and defined their own grades. To promote uniformity in grain grading and also to stimulate production of the highest quality grain, the federal government in 1916 passed the United States Grain Standards Act which established one set of standards (grade definitions) for all grain entering interstate or export commerce. Although this act added one more voice in the control of grain inspection, it brought a uniformity of grades which previously did not exist. However, so many other phases of grain inspection in the United States are under state government and private administration that the control of grain inspection may be regarded as divided.

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(1) Dorsey Richardson, Constitutional Doctrines of Justice Oliver Wendell Holmes, John Hopkins University Series 42, #3, 1924, p 60.



Centralized control is a factor which facilitates a greater realization of the benefits to be derived from a producer's system of grain inspection. The consumer's preference is transferred by price through the grades to the producer. Uniform grades, uniform grading and sharp lines of division between grades promote wide price spreads between the different grades. Although grain grades in the United States are now defined by one central authority, many other factors not under federal control tend to produce variations in grades and grading. Divided control over grain inspection is not conducive to that uniformity of grading which is necessary to a maximum realization of the benefits of the inspection system.

The United States Grain Standards Act gave the Secretary of Agriculture authority to fix and amend standards of quality of various grains. The actual work of grading was left to the inspection departments of the state governments. After 1916 all states adopted the federal grades as a basis for grading. Although the inspection departments remained under control of the state authorities, the United States Grain Standards Act required all inspectors to be licensed by the federal government. The grading of inspectors is checked for uniformity by federal supervisors. Appeals from an inspector's grading are made to the supervisor of the district, and a





further appeal from the supervisor's decision may be made to the Board of Review at Chicago. If this body fails to settle the dispute, final appeal may be made to the Secretary of Agriculture. There is no provision in the act controlling non-grading activities.

Although grades and the work of inspectors under the Grain Standards Act tend to uniformity of grading, variation in grading is apt to be caused through other means. There is no federal provision for the selection of standard samples. The sources of information are conflicting, but it would appear that state inspection departments select standard samples. In Minnesota, "The boards (Boards of Grain Appeal at Duluth and Minneapolis) are required to meet annually in joint session and establish grades of all grain to be known as 'Minnesota Grades'" (1). It is improbable that the "Minnesota Grades" are what we would call grade definitions because the United States Grain Standards Act prohibits the use of any other grades than those established by the federal Secretary of Agriculture. In all probability the "Minnesota Grades" are similar to Canadian standard samples. Since standard samples are used by inspectors in their work of grading, their selection by different authorities who

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(1) Minnesota Legislative Manual, 1933, p 161.





differ in their interpretation of the definition tends to variation in the samples in different states. The use of varying standard samples will result in a lack of uniformity of grading.

Another source of variation in grading may occur through the authority of the Secretary of Agriculture to amend grades. The modification of grades by Order-in-Council was permitted in Canada from 1885 to 1899. The practice was discontinued because frequent changes in grade classifications resulted in a loss of confidence in the Canadian certificate by the foreign importer. The European miller wants uniformity of grades and grading, - "We want uniformity in grading, so that we may know what to expect - uniformity throughout the season and the same uniformity throughout the years"(1). Again, "If these are impaired in any way - if grades are lowered by degrading or mixing either intentionally or unintentionally, the British miller will know it and the price will be lowered in consequence" (2). As long as the United States exports wheat and sells that wheat by certificate, it will be necessary to maintain uniformity of grading if she expects to receive the full benefit that should accrue from the

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(1) & (2). Rpt. Royal Grain Commission, 1895, p 170.



the operation of her grain inspection system. This uniformity cannot reach such a high degree of perfection where control is divided, where standard samples vary and where non-grading activities are under local control.

### Protein Grading

Efforts have been made at various times to introduce into Canada a method of grading which has been received with considerable favor in the United States. This method uses the protein test as a basis for determining the quality of a particular lot of grain. The protein test has been used for a number of years in flour mills as an aid in maintaining from year to year a uniform brand of flour. The practice as a method of grading was brought into prominence in certain American markets after the close of the great war. The demand of bakers for flour with a high protein content was reflected through the millers upon the American wheat market(1). Wheat possessing a high protein content was in demand. Often a thin wheat grading low by the official grading system possessed a high protein content and in some cases commanded a higher price than grain grading two or three grades higher.

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(1) The Canadian Grain Trade, p 218.



the official grading system. This fact was pointed out as an example of the limitations of the official grading system in determining the actual value of the wheat.

Such interest was aroused in Canada that a thorough investigation was made into the feasibility of using protein content as a basis for grading Canadian wheat. The report of the investigator pointed out that there is an essential difference in the situation in Canada and in the United States. The United States has a large domestic market which absorbs 80% of the crop of hard wheat. Canada exports approximately 70% of her total crop. World conditions determine the price of export wheat, whereas local conditions determine the protein premiums in the United States.

#### GREAT BRITAIN

Britain is the centre of the world's grain trade and to it grain comes from all grain exporting countries. It is here that the world's grain inspection systems are brought together and compared insofar as they affect the British miller. The buying and selling of imported grain is mainly conducted on the basis of four distinct standards of quality (1).

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(1) Rpt. Marketing of Wheat, Barley and Oats in England and Wales; H.M. Stationery Office, London, 1933.





1. Certificate Final. Where government grades exist in the country of origin and the grain is inspected prior to shipment, the production of the proper certificate, as to grade, must be accepted as final on the question of quality.
2. Sealed Sample. A sample drawn from the bulk is used as the basis for sale. The sealed sample is deposited with the London Corn Trade Association for production when called for.
3. Fair Average. This is arrived at in the country of origin on the basis of representative samples from all districts. The name of the authority determining the standard and the place where the current standard samples may be seen are duly notified to the trade.
4. Fair Average Quality. This is determined by the London Corn Trade Association from samples representing the deliveries, at time of discharge, in all ports of the United Kingdom and Continent, of grain of any one type or description. The method of determining this "fair average quality" is briefly as follows:- samples are drawn in the course of discharge by the buyer's and seller's agents. These samples are sealed and forwarded to the Association along with particulars regarding vessel, quantity, description of grain, and period of shipment. A Committee meets once a month and, after inspection of the samples, makes up the standard proportionately to the quantities represented by the samples. The committee is then in a position, if called upon, to arbitrate in regard to any particular load which departs from the f.a.q. standard so determined. It is on this f.a.q. basis that the bulk of the trade is now conducted, and about 100,000 arbitration samples are received by the Association in the course of a year.

Canada and the United States are the only two countries from which grain is accepted on the certificate final plan. Recently however, Mr. E.B. Ramsey, chairman of the Board of Grain Commissioners, in giving evidence



before the agricultural committee of the House of Commons stated "the United States final grade certificate is not now being accepted in Europe" (1). Some grain from Canada and the United States is also sold on the sealed sample plan. The f.s.g. sample "constitutes the standard - quality, weight per bushel, color, moisture content, cleanness, soundness, etc. - which will be delivered on contract, failing which an arbitration will be held and matters adjusted between buyers and sellers. A fair sample of the shipment is taken by the authorized agent of the Corn Trade Association of the port where the cargo has been landed. Two disinterested arbitrators are appointed from the arbitration committee of the local Corn Trade Association. Failing to agree, these choose a third, and if a satisfactory settlement cannot be arrived at the matter is referred to the whole committee for final judgment. Should the grain be adjudged under the standard of the f.s.g. sample, the seller must compensate the buyer up to a stated amount per cental or vice versa" (2). Australian and Argentine wheats are dealt in on the f.s.g. contract. In the case of Russian and Indian wheat special

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(1) Edmonton Journal, May 20, 1904, p 9.

(2) Rpt. Royal Grain Commission, 1925, p 175.



clauses have been added to the f.a.q. contract. These weights are usually very dirty and the standard adopted is that known as "clean terms" in which clean grain is used to make up the f.a.q. sample, and it is on the cleaned sample that adjustment is made in price.

In the markets of Britain grain is bought and sold on the certificate final or f.a.q. contract basis. Liverpool, however, has in addition a special grade of wheat - "Liverpool contract grade" - for tender on future delivery contract (1). "It is true that not much wheat is actually tendered in this way, but the point of interest is the existence of the grade and the system of selling". Wheat, Liverpool contract grade, is understood to be milling wheat "in fair merchantable condition (a slight dry warmth not to be objected to)". The grade admits three general classes of wheat, namely, American red wheat grown east of the Rockies, Argentine and Australian wheat.

#### The Origin of the f.a.q. System

The sale of grain on an f.a.q. basis is a trade practice and not a law, consequently, its development is more difficult to trace than that of commodity grading instituted by statute. To facilitate an inquiry into the

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(1) Rpt. Marketing of Wheat, Barley and Oats in England and Wales, p 66.





origin of the F.A.Q. system, let us assume a situation prior to the adoption of present trade practices. In our assumed situation, the prospective buyer would personally examine the grain offered for sale. He would visit the ship and with his probe secure a sample as nearly representative of the shipment as it was possible for him to secure. On the basis of this sample he would make his offer.

The hold of a ship usually is filled so full that it is impossible to secure a truly representative sample (1). Knowing this the seller can easily "trim" his shipment to deceive the purchaser. The buyer may adjust his price to protect himself against the suspected fraud, but the seller aware also of this practice may increase the amount of his deception. The battle goes on in a vicious circle. Under this system of trade the buyer is at the mercy of the seller, but the seller is also operating under handicaps. If he experiences any difficulty in disposing his shipment, he has demurrage and storage charges adding to the cost of his sale. In our assumed situation both buyer and seller suffer and each seek some means of improving their position,- the buyer to avoid loss from fraud and

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(1) This same condition occurs when train cars are loaded too full. When a proper sample cannot be secured, a provisional grade is given and the certificate marked "hold full" indicating that the grade is subject to correction when the car is unloaded.





the seller to lessen handling charges.

To avoid the heavy expense of displaying a whole cargo of grain offered for sale, the seller could sell by sample. A sample could be forwarded ahead of the cargo and the shipment sold before the ship arrives in port. Such a practice would relieve the seller of handling charges while waiting for a sale. It would also enable the buyer to purchase for future delivery. Sale by sample, however, implies that the sample represents the shipment, and the buyer to be induced to trade under such an arrangement would have to be guaranteed that the shipment was as good as the sample.

Having once established a sample market for grain transactions, fraud once again becomes a factor tending towards the development of the f.o.b. standard. If a sample is not truly representative of the shipment, some adjustment is necessary otherwise the value of sample selling is worthless. This adjustment would take place upon the delivery of the shipment. A common method of settling disputes is to refer the matter to a third party, usually the law courts. There are certain disadvantages attending the settlement of certain types of trade disputes by law so a trade court or board of arbitration is set up for the purpose of making adjustments between sample and cargo.



The last step in the development of the f.a.q. system is the extension of sample selling as the result of economic expediency. If the Board of Arbitration makes an adjustment between sample and cargo, why have more than one sample? Each cargo may be different, but they are all about the same. Even if there are differences it is immaterial because the differences are adjusted by the Board of Arbitration. The same line of reasoning may be applied to a number of shippers and to all the shipments exported from a particular port or country. Such is the system to-day. A sample is made up from the average quality of grain from that particular country and that sample represents the fair average quality of the country's shipments. It is upon the f.a.q. sample that the arbitration is made.

The principles back of the f.a.q. system are sample selling and arbitration for variations between sample and shipment. The factors influencing the development of the system are the practice of fraud and economic expediency. The factors of production, fraud and economic expediency are responsible for the development of both the grading and the f.a.q. systems. Why may we ask should the same factors produce different results? The f.a.q. system is a consumer's system developed to protect the consumer from



the producer, or the buyer from the seller. The grading system is a producer's system developed to protect the producer from other producers.

### THE ARGENTINE AND AUSTRALIA

The f.a.q. system of buying and selling grain in Britain has been adopted in both the Argentine and Australia. The Argentine wheat grower may sell his wheat on sample through a broker at central markets or direct to the local grain merchant, representing one of the large dealers, at the local country point on f.a.q. standard (1). If sold by the latter method, he receives 96% of the sale price, less charges. The balance is settled for after the 15th of March, the date when f.a.q. standards are made at Buenos Aires. If he sells by the former method, a sample is taken at the thresher, half of which is retained by the farmer and the other half forwarded to the Exchange. Settlement is made on the f.a.q. standard.

The f.a.q. standard in use in the Argentine is not the same f.a.q. standard in use in Great Britain for the purchase of Argentine wheat. The Argentine f.a.q. standard, known in Britain as the "fair average", is made up in Buenos Aires and Rosario. The selection of the

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(1) Rpt. Sask. Royal Grain Commission, 1936, p 103.





British f.s.q. standard for the purchase of Argentine wheat in Britain has already been described.

The system of handling the grower's grain in Australia is very similar to that of the Argentine. Within recent years, however, grain grading has been advocated in Australia. In 1927 New South Wales passed a Wheat Act (1) providing for the establishment of grades and standards of wheat in accordance with the recommendations of a wheat standards board. Definite action to establish grades has not yet been taken (2). In reviewing the situation regarding grain grading in Australia, the International Review of Agriculture states, "It will be seen that while grading is essentially a matter of expert judgment, its effective carrying out depends upon certain mechanical devices which are inseparable from bulk or elevator handling. The adoption of fixed grades in Australia is now merely a question of time" (3). Wheat for export from New South Wales is marketed on the basis of a single standard known as the f.s.q. This standard is fixed annually by a committee of members of the Sydney Chamber of Commerce and two government representatives. Samples obtained from each of

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(1) Statutes, New South Wales, 1927, c 6.

(2) New South Wales Yearbook, 1931, p 212.

(3) International Review of Agriculture (Int. Institute of Agriculture) No. 5, March 1928, p 261.



the wheat districts are weighed, and an average struck, which is used as a standard in all wheat exportations. A "second grade" standard of 56½ lbs was fixed on Feb. 9, 1931, for bagged wheat of the 1930-31 season. The first standard averaged 60 - 62 lbs. Two thirds of the wheat is bagged on farms. Forty percent of the wheat exported is in bags.

In spite of the advantages of trading on the certificate final, the British miller objected to Australia adopting a certificate final plan. The objection is that if the quality of the grain is of lower grade than that specified in the certificate, the miller has no redress, whereas under an f.a.q. contract, adjustment would be made by the board of arbitration.



## Chapter 14

### CONCLUSION

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Guided by those principles which facilitate the transfer of the consumers' preference to the producer, adjustment has brought a large measure of satisfaction with the operation of the Canadian grain inspection system. To maintain public approval, future adjustment of the system must be based on those principles underlying its success.

Regardless of how satisfactorily it may operate at a given time, an economic institution cannot maintain public approval and remain static. Changing conditions necessitate adjustment if the institution will continue to serve the public and enjoy their support. When an institution gets "out of line" with economic conditions, some persons or classes of society suffer, and they voice their dissatisfaction with the operation of the institution by criticisms and complaints. It has been criticism together with the ability to correctly adapt the institution to changing conditions that has brought the Canadian grain inspection system a large share of public approval. Criticisms of the Canadian grain inspection system have come from three economic groups, - the consumers, the producers and the middlemen.





THE CONSUMER DEMANDS UNIFORM GRADING

The consumer may not know or care to know how a grading system operates, but he is vitally concerned with the quality of the grades offered to him for sale. He does not buy No. 1 Northern wheat because it is graded No. 1 Northern, but because No. 1 Northern wheat has or he expects it to have certain definite qualities. Irrespective of whether he purchases by grade, by sample, or by F.O.B. standard, the consumer buys wheat according to its quality. Because it is economical and expeditious, purchase by grade is preferred provided quality is that expected. On the British Corn Exchanges samples of wheat from different countries are on display. Among the samples are to be found standard samples of Canadian export grades. The buyer of wheat compares the quality of the different samples on exhibit, and on the basis of quality he makes his bid or price. If he buys by sample and the shipment is inferior to the sample, he can secure an adjustment in the contract price. If he purchases by grade, certificate final, he can secure no compensation for loss when the shipment is inferior to the sample of that grade on display.

Unless the quality of grades is maintained uniformly throughout the season and from year to year, the Canadian grading system is threatened with the loss of public esteem,





decay and possibly extinction. It has been pointed out that the British importer has no redress from loss occasioned by the receipt of a shipment inferior in quality to that of the standard samples on display. Furthermore, he is under no obligation to purchase grain by grade or certificate final. He only employs that system of purchasing because it is economical and expeditious. If the gains from such a method of buying are wiped out by losses from inferior quality, he will find other means of buying our wheat. He has developed a method of sale by sample for grain originating from Argentina and Australia in which adjustment is made for variation in quality between sample and shipment. In the final analysis the British importer buys Canadian grain by sample, but accepts the shipment as officially graded without provision for adjustment because he has confidence that the quality of shipment is equal to that of the standard sample. If that confidence is lost the foreign importer may go so far as to abolish the Canadian certificate final as a method of purchasing grain. If such an event does occur the Canadian grain inspection system will have failed as a method of trade regulation facilitating the transfer of the consumers' discrimination to the producer.

The Canadian government, however, has no intention of



permitted practices detrimental to the reputation of the grain inspection system. For years complaints have been received respecting the lack of uniformity in Canadian grades, and as a consequence, many devices have been incorporated in the grading system. The use of definitions, standard samples, standards boards, the centralizing of control in one governmental body, the prohibition of mixing export grades in terminal elevators, together with the rigid check on export cargoes have reduced variation in grades and grading to a minimum. Variation in the quality of grades continues to exist. The variation in quality of No. 2 Northern at Vancouver and Atlantic ports, due to the different proportions of Garnet entering that grade, has resulted in the establishment of separate grades for Garnet wheat. Those variations in grades and grading, arising as a result of changes in production or the development of new trade practices, will be remedied to retain the confidence of the foreign importer.

There are, however, certain variations in grades and grading beyond the control of man. The quality of a grain crop is largely dependent on climate. In some years the characteristic defect of the crop may be sprouts. In other years it may be frost, immaturity, color or excessive moisture. No two crops are exactly alike. The appearance of



a grade in any one year may differ from that of other years, but, so far as it is humanly possible to determine by critical observation supported by the evidence of laboratory analysis, the quality of the grade is maintained from year to year.

## THE PRODUCER DEMANDS THE FULL EXTENT OF THE CONSUMER'S

### DISCRIMINATION

Most of the criticism levelled at the grain inspection system has come from producers. The farmer is the one who has the most to benefit from the proper functioning of the grain inspection system since it is a method of transferring the consumer's preference to him. Most of those who criticise the grading system fail to realize the importance of the consumer in establishing and maintaining grades. Producers have complained of the grading being too strict, too rigid. As a matter of fact the grading of their grain has been given the benefit of the doubt. Being human their self-interest encourages them individually to want a little more, to lower the qualifications so that their grain will grade higher. The adoption of such a practice may in the short run result in small pecuniary gains to particular individuals, but in the long run it will result in greater losses to the producers as a whole. The foreign importer of Canadian wheat wants the quality of the grades maintained at a constant level. The foreign buyer of Canadian grain





is buying right, reason and only does so because he has confidence that we will maintain the quality of our present product. If his confidence is misplaced, he has no redress. The next time he buys our grain he will buy it <sup>at</sup> a low enough price to insure him against any loss he may expect. If we lose the confidence of the foreign buyer in the Canadian certificate final, we only stand to lose. He will insist on buying by sample and the grades which are determined by our inspection system, which does transfer the consumer's preference to the producer, will not be accepted. This situation is now reported of the United States grading system.

Another criticism of the grading system is that of incompetence. Mistakes are made, it is true, but these are very rare. Grain inspectors are men of long experience who grade more samples in a week than a farmer does in a lifetime. Most grain is shipped through elevators, and the elevator company's agent at the inspection point checks the inspector's grading. The criticism of incompetence may be dismissed as unfounded.

Another criticism of the grading system does not properly belong to it. Grading at country elevators may vary but that grading is not official. Grain companies are in business to buy grain and if, to get volume, they offer more for the grain, by giving it a higher grade, that is



their business. When the grain companies return to grading for quality and not for competition, growers should have no complaint respecting grading. This complaint was one of the causes of the recent farmer's strike at Wyman.

In any dynamic institution such as the grain inspection system constant change is necessary if any degree of perfection is to be maintained. When parts of the system are out of line with the changing conditions, complaints will of course arise. Complaints usually precede the amendment of the thing complained of. The grain inspection system is designed to transfer the consumer's discrimination to the producer, and, when parts of it break down or need adjustment, complaints indicate the need for investigation. In investigating complaints and introducing the necessary adjustment, the Board of Grain Commissioners, in whose care this delicate machine is entrusted, are able to keep the system working smoothly and efficiently.

#### THE PROBLEM OF GRADING GARNET WHEAT

One of the most pressing problems which has confronted the grain inspection system during the last few years has been the grading of Garnet wheat. This new wheat is favored by the farmers of certain areas, but it is disliked by the miller who interprets the consumer's preference. The market discriminated against Garnet and against those ports



shipping large quantities of Garnet. This discrimination, however, fell upon the growers of Marquis wheat as well as upon the producers of Garnet. Such a situation was contrary to the principles of grain inspection and provision was made to correct it. After August 1, 1933, Garnet wheat has been graded separately(1).

The extension of agricultural settlement into new areas has created a demand, from growers, for and resulted in the increased production of new early maturing wheats. In recent years the expansion of the wheat acreage in the prairie provinces has been northward into regions characterized by a shorter frost-free season than that lying adjacent to the United States border. The standard variety, Marquis, suffered from severe injury from climate in the northern regions and quite often the crop was of a very poor quality. In response to the demand of farmers for early maturing varieties, several new wheats were developed. One of the new wheats, Garnet, satisfied the demand for early maturity and high yield but is of inferior milling quality. A conflict developed over the production and grading of Garnet. Some farmers wished to continue the production of Garnet but feared an increased discrimination

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(1) Statutes of Canada, 1934, p. 26.





against it if Garnet grades were established. Farmers growing Marquis wanted separate grades for Garnet to reduce the discrimination against the mixtures containing their wheat. The grain trade, millers and others interested in the quality of Canadian wheat discouraged the production of Garnet.

The farmer's profit motive will encourage him to grow Garnet if it, in spite of discrimination, is the most profitable wheat to produce under his conditions. The farmer is interested in the net profit per acre, and he will grow those crops and varieties whose production will return him the greatest net profit. The farmer finds Garnet a profitable wheat to grow. He will continue to grow Garnet so long as there is more profit in it than in some other crop or variety. The Garnet grower rightly feared a price spread between the Northern and Garnet grades. If the discrimination is great enough to wipe out the advantage of yield and early maturity, Garnet production will decline. If not, Garnet production will likely increase.

An increase of Garnet production will tend to increase the total acreage devoted to wheat in the Western provinces. Areas in the north central portion of the prairie provinces now restricted because of early fall frosts to the growing





of coarser grains may be expected to draw greater attention to the cultivation of wheat. New areas may be opened up for settlement in the northern parts of the provinces.

Garnet wheat is inferior in milling and baking quality to that of Marquis and will be discriminated against whether it be in pure form or mixed with other varieties. Mixtures of two qualities into one group will, if equal payment is made for each, favor the production of the lower quality. The quality of that group or grade will decline and ultimately the result will be a lower price for the group or grade. This situation actually existed. At Vancouver which received the larger percentage of Garnet the spread between No's 1 and 2 Northern (1) was greater than at Winnipeg. Mixing may conceivably lower the total value of the two wheats. The miller does not want mixed wheat because mixtures are often difficult to mill. Mixing may also decrease the blending value of a wheat and Canadian wheats are wanted in Britain for blending.

The inferiority of Garnet as a milling wheat was concisely stated by Dr. Geddes (2) to the Agricultural Committee of the Alberta Legislature (3). Garnet requires

(1) Garnet is not permitted in No. 1 Northern.

(2) Chemist, Grain Research Laboratory.

(3) March 12, 1934.



a longer tempering period and a higher moisture content in tempering process. Mixtures of Garnet with Marquis and Remond often serious difficulties in milling. The water absorbing quality of Garnet flour is lower than that of Marquis. The protein in Garnet is inferior to that of Marquis. The protein content is also lower. The spread in quality between Garnet and Marquis increases the further one goes north. The blending quality of Garnet, due to its yellow color, is inferior to that of Marquis. The objectionable color can be removed by bleaching but some countries prohibit the bleaching of flour.

The mixing of Garnet and Marquis in the Northern grades narrows the range of the consumer's discrimination transferred to the producer and defeats the purpose for which the grain inspection system was established. The addition of large quantities of Garnet to No. 2 Northern lowered the quality of that grade in the opinion of the miller and foreign importer. The mixture was of less value than pure Marquis and presumably of greater value than pure Garnet.

The establishment of Garnet grades is entirely in accord with the principles underlying grain inspection. The consumer prefers the separation of the different qualities. The producer is entitled to the fruits of his labor but not to lower quality and price of the product



grown by other producers.

### THE PROBLEM OF MOISTURE CLASSIFICATION

Recent requests for a finer division of the consumer's discrimination have resulted in a proposal to adopt narrower intervals between the definite moisture classifications. The proposal, advocated in the Alberta Legislature, was submitted to their Agricultural Committee for consideration. The resolution, in part, is as follows:-

"...Whereas the existing regulations do not provide for a scaling of the penalty imposed which is the same whether the wheat shows a moisture content of 14.5 or 17, which is manifestly unjust; and Whereas  
..." (1)

On March 12, 1934, the Agricultural Committee took evidence from members of the Board of Grain Commissioners, officials of the federal grain inspection staff, and representatives of grain companies and farmers.

The proposal, if adopted, would increase the number of wheat grades by approximately 25%. At present there are three moisture intervals, dry, tough and damp, separated by two definite moisture classifications, 14.5 and 17 %. The proposal sought to establish three definite moisture classifications, 14.5, 16.0 and 17.0 %, and increase the number of intervals to four.

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(1) Taken from the evidence submitted to the Agricultural Committee, Alberta Legislature, March 12, 1934, on the "Moisture Content of Wheat".





It was hoped that an increase in the number of moisture classifications would scale down the penalty for excessive moisture. Since the proposed scheme divided the present tough classification, it might reasonably be expected that the proposed "Warrior" tough would be penalized less heavily than the present tough. The former but not the latter expectation was realized in a trial by the Saskatchewan Wheat Pool. The practice was abandoned before it had operated a season. In giving evidence before the Agricultural Committee, Dr. D. A. MacGibbon (1) quoted the findings of the Saskatchewan Wheat Pool respecting their trial of increased moisture classifications:- (2)

"...People with grain meeting 14.5 and 15 were still getting as much discount as they were before, and the people between 16 and 17 were going to get a higher discount. There was not going to be much benefit to the farmers in trying to work out a system of that kind, and after very carefully reviewing the whole thing said that the practical difficulty of operation did not make it desirable and recommended going back to simpler methods".

Objection to an increased moisture classification was voiced by the grain companies. Mr. Settle of the Winnipeg Grain Company pointed out that the limited bin space in country elevators would add to the cost of handling if the

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(1) Member of the Board of Grain Commissioners.

(2) Evidence submitted to the Agricultural Committee March 18, 1934.



number of grades were increased. The profits of country elevator were largely determined by the quantity of grain handled but the quantity of grain handled at any shipping point is confined to that produced in the district. Provision for handling an increased number of grades would not increase or decrease the quantity of grain handled at any country shipping point, but it would slow up farmer's deliveries. It is difficult to see how the slowing up of deliveries would affect the cost of handling grain in country elevators. Some elevator costs are in direct proportion to the quantity of grain handled and, since the quantity of grain produced in a district has no relation to the number of grades, the rate of delivery has no influence on direct costs. Other elevator costs, such as interest, depreciation, and salaried, are annual charges against the total volume of business and are not in the least affected by the rate of delivery except in case the elevator operates only a part of a year, and unless the competition <sup>of</sup> elevator companies results in providing facilities sufficient to allow farmers to deliver at the time they wish to deliver except in unusually heavy crop years. Even though an increase in the number of grades did increase the cost of handling grain in country elevators, the increased costs would not be borne by the grain companies but by the farmers.



The real objection of the grain elevator to an increased number of grades seems to arise from their fear of the effects of competition. The practice of farmers delivering grain as rapidly as possible and the desire of grain companies to handle a large volume would tend, if the rate of delivery were increased, to introduce unorthodox practices in the competition for business. There would appear to be no objection by terminal elevators to an increase in the number of moisture classifications because grain with excessive moisture is dried previous to storage.

An increase in the number of moisture classifications by decreasing the rate of handling at country shipping points may be objectionable to those farmers forced to provide farm storage facilities. Some farmers make no provision to store grain on the farm. As soon as threshed or combined, grain is hauled direct to the elevator. If delivery at the country elevators were retarded, some farm storage might be necessary which would add to the cost of crop production.

An increase in the number of grades does permit a greater range of discrimination by the consumer, but little will be gained by an increase in the number of grades based on variations of a dockage factor. Some defects of grain are inherent in the grain and cannot be removed from





the grain or its finished product. Other defects such as foreign material and excessive moisture are removed, if objectionable, from the grain before it is manufactured into the finished article. The miller knows his wheat to a certain definite percentage of moisture preparatory to the milling process. Wheat for export is dried to a percentage of moisture considered safe for storage. The discount attributable to the presence of excessive moisture is due to the cost of drying and to the loss in weight in grain incident to the removal of excess moisture. Grades are no more necessary to indicate variations in moisture content than they are to indicate variations in foreign matter content.

The discrimination against excessive moisture may be distributed more equitably and with finer intervals of variation by treating it as dockage rather than as a basis for grade classifications. If excessive moisture were treated as dockage, deductions could be made for the quantity of excess moisture and for the cost of drying. A method of discounting dockage for excessive moisture is suggested as follows:-





	1st	2nd
Weight of grain delivered	5000 lbs.	5000 lbs.
Percentage of excess moisture	15.0 %	3.0 %
Pounds of excess moisture	750 lbs.	150 lbs.
Net weight of dry grain	4250 lbs.	4850 lbs.
Bushels of dry grain	89-48 bu.	97-48 bu.
Market price of dry grain	\$2.7	\$2.7
Cost of drying	3.4	3.4
Price of tough or damp grain	\$2.7	\$2.7
Net value of load	\$79.84	\$79.20

The two examples chosen in the above illustration would both grade tough and bring the same price per bushel under present regulations. By treating excessive moisture as dockage, the true value of each lot of grain would be determined. The difference in the price per bushel on the basis of gross weight is 1.6¢ which difference is wholly accounted for by the difference in moisture content.

Objection would be raised by the grain companies to the adoption of a practice such as outlined above. The determination of accurate moisture content for each load of street grain purchased would greatly increase the work of elevator operators. In the busy season the present elevator staffs would be unable to make moisture determinations with the existing methods of moisture testing. Additional help



would be required which would increase the handling charges. Unless the gains from treating excessive moisture as dockage were greater than the extra cost of handling, the adoption of the practice would be economically unsound. There might also be a delay in completing farmer's grain sales. The present method of moisture determination requires about thirty minutes and, unless a more rapid method were discovered, the objections of the grain companies are well founded. The objection to treating excessive moisture as dockage could not be made against the sale of grain in carload lots since the moisture content is determined at the time of official inspection.

#### THE PROBLEM OF CONTROLLED PRODUCTION

The control of production has received serious consideration in recent years, but, up to the present time, the problem has not been linked up with the grain marketing system. Control of both production and marketing has been advocated for some commodities. The unrestricted growth of distribution and marketing agencies has resulted in a situation promoting very large price spreads between the producer's selling price and the consumer's purchase price. The grain trade has not received recent criticism on excessive price spread. In fact many of the charges for handling grain have been regulated for a number of years.



These charges have been set so as to permit a reasonable profit by the grain companies but at the same time prevent exploitation of the farmer.

Production control of grain has been directed, in the last few years, towards the regulation of factors affecting supply. Price is the medium by which the consumer's discrimination is transferred to the producer. Price, however, is largely controlled by the interaction of supply and demand. Abundant supplies together with depressed effective demand have lowered the price of grain. Producers and producing countries have attempted to raise prices by reducing the production or supply. This has been attempted by a curtailment of acreage and by export quotas.

In some respects there is a similarity between state regulation influencing quality and quantity of production. Both quality and quantity of production are factors influencing the price paid by the consumer. The consumer prefers high quality and large quantity. In the latter instance he is enabled to secure his supplies at a low price. The consumer's discrimination respecting quality is confined to those qualities offered for sale at a given time. The spread in price between different qualities is to a certain extent influenced by the quantity of each quality offered for sale. Discrimination respecting





quantity is made between the particular commodity and a number of other commodities, substitutes and money. Although the consumer may give a premium for high quality, the producer may find it more profitable to continue low quality production. While the consumer may prefer low prices, the producer's profit motive encourages him to adopt such production practices as return to him a maximum profit. Grain inspection has been defined as a system of trade regulation facilitating the transfer of the consumer's discrimination to the producer. Up to the present it has been concerned only with transferring discriminations respecting quality. There seems to be no reason why it should not be concerned with transferring discriminations respecting quantity.

### THE FUTURE

The development of grain inspection has been and will be guided by certain definite principles. Briefly stated these principles are: the consumer demands uniform grading; the consumer's preference is the basis for trade classifications; the producer is entitled to the fruits of his labor; and the control of individual liberty or class privilege is necessary for the promotion of social welfare. Canada is growing grain and will continue to grow grain for some time to come. Canada has a grain inspection system



(27)

which undoubtedly will function in future. Conditions in future will change as they have in the past and necessitate corresponding change in the grain inspection system. If the system is to facilitate the transfer of the consumer's discrimination to the individual producer, that transfer must be guided, and what better guide is there than the experience of the past.



## APPENDICES



## APPENDIX 1

Excerpt from the

STATUTES OF NOVA SCOTIA, 1792, c 4, s 11 (1)

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"And be it also enacted, by the authority aforesaid, That all grain exposed for sale, shall not be deemed merchantable, unless it be of the following standard weight, to say:-

Wheat	shall	weigh	per	bushel	fifty	eight	pounds	Avoirdup-
Rye	"	"	"	"	fifty	six	"	" oise
Indian Corn	"	"	"	"	fifty	eight	"	"
Barley	"	"	"	"	forty	eight	"	"
Oats	"	"	"	"	thirty	four	"	"
Pease	"	"	"	"	sixty		"	"

And that all such grain, as may be imported or brought to market for sale, shall be, on request of the purchaser, inspected and measured by the sworn inspectors of such town or port, where the same shall be brought for sale, and that the inspectors shall be allowed and paid the one half by the purchaser, and the other half by the seller, at, and after the rates hereafter mentioned, for his attention and trouble therein, to say, for measuring all grain (oats excepted) two shillings per hundred bushels, and for oats, one shilling per hundred bushels."

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(1) Supplied through the courtesy of Miss Annie F. Donohue, Librarian, Legislative Library, Halifax, Nova Scotia.





## APPENDIX 2

Excerpt from the

STATUTES OF NOVA SCOTIA, 1838, c 4, s 11 (1)

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And be it further enacted, That all Grain and Corn hereinafter mentioned shall not be deemed or considered merchantable, unless the same shall be respectively of the undermentioned weight, that is to say:-

Barley,	when foreign or imported,	fifty-two pounds	Avoirdupoise,	per bushel and of the production	of this Province, forty-eight pounds	Avoirdupoise	per bushel.
Wheat	sixty	pounds	Avoirdupoise,	per bushel.			
Rye	fifty-six	"	"	"	"	"	
Indian Corn	fifty-eight	"	"	"	"	"	
oats	thirty-four	"	"	"	"	"	
Malt	thirty-nine	"	"	"	"	"	

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(1) Supplied through the courtesy of Miss Annie F. Donohue.



## APPENDIX 3

Excerpt from the

REVISED STATUTES OF NOVA SCOTIA, 1864, c 65

"OF THE REGULATION AND INSPECTION OF PROVISIONS,  
LUMBER, FUEL AND OTHER MERCHANDISE"

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## Grain and Corn

55. Merchantable grain and corn shall be of the following weight per bushel, viz; wheat sixty pounds; foreign barley fifty-two pounds; and if the produce of the Province forty-eight pounds; rye fifty-six pounds; Indian corn fifty-eight pounds; Oats thirty-four pounds and malt thirty-nine pounds.

56. All wheat and barley not the produce of the province shall be sold by weight, and the number of pounds in the last section established as the standard weight of a bushel thereof respectively shall be deemed to represent a bushel of such wheat or barley.

57. All grain and corn sold on board of and intended to be delivered from any vessel, shall be weighed and measured by a sworn measurer: but grain or corn may be exported or sold in a store without his intervention, unless the purchaser require to have the same weighed or measured by such officer.

58. If the measurer shall find the same heated, or in any other respect unmarketable, he shall inform the purchaser, and shall not take any account thereof unless at the request of the purchaser.

59. The grain measurers shall receive from the seller for inspecting and weighing or measuring grain or corn, at the rate of fifty cents for every hundred bushels, The measures used by them shall in all cases be struck with a straight stick rounded at the edges.



60. If any person shall sell or deliver any grain or corn in violation of these provisions, he shall forfeit ten cents for every bushel of such grain or corn.

61. If any grain measurer shall undertake to attend the weighing and measuring of grain or corn from more than one vessel at the same time, or shall be guilty of any neglect or dereliction of his duty, he shall forfeit a sum not exceeding twenty dollars for each offence.





#### APPENDIX 4

Excerpt from the

#### POT AND PEARL ASH INSPECTION ACT

Lower Canada, 1795, c 2, s 3

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iii. Provided also and be it further enacted, that if any dispute shall arise between such Inspector and any possessor of such Pot- and Pearl-ashes, concerning the quality thereof, upon application to any of his Majesty's Justices of the Peace within the city, town or place where the same may happen, such Justice of the Peace shall and is hereby required to issue a warrant to three indifferent persons of skill and integrity to be viewers, to view and search the said Pot- or Pearl-ashes as the case may be, one of the said persons to be named by the said Inspector, another of them to be named by the possessor of such Pot- or Pearl-ashes, and the third to be named by the said Justice, which three persons shall be duly sworn carefully to re-examine the said Pot- or Pearl-ashes, as the case may be, and make report as soon as conveniently may be of the quality thereof as they shall find the same. And the said Justice is hereby empowered and required to give judgment agreeable to the report of the said three viewers or any two of them, which judgment shall be final; And in case the said Pot- and Pearl-ashes or any part thereof are adjudged to be of the quality or qualities as distinguished by the Inspector, the said Justice is hereby authorized to direct the said Pot- or Pearl-ashes to be branded by the said Inspector agreeable to such distinction, and shall also award the owner or possessor thereof to pay to such Inspector six-pence current money for each hundred weight of such Pot- or Pearl-ashes as shall be adjudged as aforesaid, with reasonable costs and charges of re-examination. But in case the said Pot- or Pearl-ashes or any part thereof shall, upon such trial be found to differ from the said Inspector's judgment thereon, the same shall be branded according to the report of the said viewers so approved aforesaid, and the costs of such re-examination, so far as the same may be found to differ from the survey and opinion of the Inspector, shall be paid by the Inspector.



## APPENDIX 5

Excerpt from the

STATUTES OF THE PROVINCE OF CANADA, 1868, c. 3

"AN ACT RESPECTING THE INSPECTION OF WHEAT AND OTHER GRAIN"

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13. The following shall be the standards of Wheat and other Grain:-

Wheat

No.1. White Winter - Shall be sound, plump, and free from admixture of other Grain.

No.2. White Winter - Shall be sound and good, but less free from other Grain than No. 1.

No.1. Red Winter - Shall be sound, plump, and free from admixture of other Grain.

No.2. Red Winter - Shall be sound and good, but less free from other Grain than No. 1.

Extra Spring - Shall be sound, plump, and free from admixture of other Grain, and weigh not less than 61 pounds per Winchester bushel.

No.1. Spring - Shall be sound, free from admixture of other Grain, and weigh not less than 59 pounds per Winchester bushel, and shall consist of two grades - No. 1 Bright and No.1.

No.2. Spring - Shall be sound, but less free from other Grain than No. 1, and its weight shall not be less than 57 pounds per Winchester bushel.

All unsound, damp, or very dirty Wheat of whatever kind, shall be classed as 'Rejected'.



Peas.

No.1 - Shall be clean, sound and white.

No.2 - Shall be sound, mixed.

All unsound, damp, or very dirty Peas shall be classed  
'Rejected'.

Corn

Pure White - Pure Yellow - Mixed and Rejected --- Shall  
be classed according to its quality.

Oats

No.1 - Shall be clean and sound.

No.2 - Shall be sound but too dirty for No. 1.

All unsound, damp, or very dirty Oats shall be classed  
as "Rejected".

Rye

No. 1 - Shall be sound and well cleaned.

No. 2 - Shall be such as is too dirty to be classed as No.1.

Barley

No. 1 - Shall be plump in the berry, well cleaned, sound  
and bright in color.

No. 2 - Shall be sound and clean.

All unsound, damp, or very dirty Barley shall be classed  
as 'Rejected'.

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APPENDIX 6

Excerpt from the

THE GENERAL INSPECTION ACT, 1873, c 49

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Winter Wheat

No. 1 White Winter Wheat shall be pure White Winter Wheat, sound, plump and well cleaned.

No. 2 White Winter Wheat shall be pure White Winter Wheat, sound and reasonably clean.

No. 1 Red Winter Wheat shall be Red or Red and White mixed, sound, plump and well cleaned.

No. 2 Red Winter Wheat shall be pure Winter Wheat, Red or Red and White mixed, sound and reasonably clean.

No. 3 Winter Wheat shall include Winter Wheat not clean and plump enough for No. 2, and weighing not less than 55 pounds to the measured Winchester bushel.

Rejected Winter Wheat shall include Winter Wheat damp, musty, or from any cause so badly damaged, as to render it unfit for No. 3.

Spring Wheat

No. 1 Spring Wheat shall be plump and well cleaned.

No. 2 Spring Wheat shall be sound, reasonably clean, and weighing not less than 56 pounds to the measured Winchester bushel.

No. 3 Spring Wheat shall be reasonably clean, not good enough for No. 2, weighing not less than 54 pounds to the measured Winchester bushel.





All Spring Wheat damp, musty, grown, badly bleached, or from any other cause unfit for No. 3 shall be graded Rejected.

A mixture of Spring and Winter Wheat shall be called Spring Wheat and graded according to the quality thereof.

Black Sea and Flinty Fife Wheat shall, in no case, be inspected as higher than No. 2.



APPENDIX 7

Excerpt from the

GENERAL INSPECTION ACT, 1885, c 66

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56. The grades of grain shall be as follows:-

Spring Wheat

Extra Manitoba hard wheat shall be sound and well cleaned, weighing not less than sixty-two pounds to the bushel, and shall be composed of red Fife wheat grown in Manitoba or the North West Territories of Canada.

No 1 Manitoba hard wheat shall be sound and well cleaned, weighing not less than sixty pounds to the bushel and shall be composed of at least eighty-five per cent of red Fife wheat grown in Manitoba or the North West Territories of Canada.

No 2 Manitoba hard wheat shall be sound and reasonably clean weighing not less than fifty-eight pounds to the bushel, and shall be composed of at least eighty-five per cent of red Fife wheat, grown in Manitoba or the North West Territories of Canada.

No 1 Canada hard wheat shall be sound and well cleaned, weighing not less than sixty pounds to the bushel, and shall be composed of at least eighty-five per cent of hard wheat.

No 2 Canada hard wheat shall be sound and reasonably clean, weighing not less than fifty-eight pounds to the bushel, and shall be composed of at least eighty-five per cent of hard wheat.

No 1 Northern spring wheat shall be sound and well cleaned, weighing not less than sixty pounds to the bushel, and shall be composed of at least fifty per cent of Red Fife wheat, grown in Manitoba or the North West Territories of Canada.

No 2 Northern spring wheat shall be sound and reasonably clean, weighing not less than fifty-eight pounds to the bushel, and shall be composed of at least fifty per cent of red Fife wheat, grown in Manitoba or the North West Territories of Canada.



No 3 Northern Spring wheat shall comprise all wheat of the above mentioned varieties, fit for warehousing, and weighing not less than fifty-six pounds to the bushel, not good enough to be graded as No 2.

No 1 Spring wheat shall be sound and well cleaned, weighing not less than sixty pounds to the bushel.

No 2 Spring wheat shall be sound and reasonably clean, weighing not less than fifty-eight pounds to the bushel.

No 3 Spring wheat shall comprise all wheat fit for warehousing, not good enough to be graded as No 2, weighing not less than fifty-six pounds to the bushel.

Rejected Spring wheat shall comprise all wheat fit for warehousing, but too low in weight or otherwise unfit to be graded as No 3.

Goose wheat, No 1 shall be plump and well cleaned, weighing not less than sixty-one pounds to the bushel.

Goose wheat, No 2 shall be plump and reasonably well cleaned, weighing not less than fifty-nine pounds to the bushel.

Goose wheat, No 3 shall comprise such as is not good enough to be graded as No 2, reasonably clean and weighing not less than fifty-five pounds to the bushel.

### Winter Wheat

Extra white winter wheat shall be pure white winter wheat, choice in color, sound, plump and well cleaned, weighing not less than sixty-two pounds to the bushel.

No 1 white winter wheat shall be pure white winter wheat, sound, plump and well cleaned, weighing not less than sixty-pounds to the bushel.

No 2 white winter wheat shall be pure white winter wheat, sound and reasonably clean, weighing not less than fifty-eight pounds to the bushel.

No 1 Red winter wheat shall be pure red winter wheat, sound, plump and well cleaned, weighing not less than sixty-two pounds to the bushel.





No 2 Red winter wheat shall be red winter wheat sound and reasonably clean, weighing not less than sixty pounds to the bushel.

No 1 Mixed winter wheat shall be white and red winter wheat mixed, sound, plump and well cleaned, weighing not less than sixty-two pounds to the bushel.

No 2 Mixed winter wheat shall be white and red winter wheat mixed, sound and reasonably clean, weighing not less than fifty-nine pounds to the bushel.

No 3 Winter wheat shall include winter wheat not clean and plump enough to be graded as No 2, weighing not less than fifty-seven pounds to the bushel.

Rejected winter wheat shall include winter wheat damp, musty, or from any cause so badly damaged as to render it unfit to be graded as No 3.

All good wheat that is slightly damp shall be reported and entered on the inspector's books as "no grade", with the inspector's notations as to quality and condition.

All wheat that is in a heating condition, or too damp to be considered safe for warehousing or that has any considerable admixture of foreign grain or seeds, or is badly binburnt, whatsoever grade it might otherwise be, shall be reported and entered on the inspector's books as "condemned", with the inspector's notations as to quality and condition.

Any material admixture of "rice wheat", otherwise known as "goose" or "California" wheat, or of red-chaff wheat with other descriptions of wheat, shall exclude the parcel from regular inspection.

All wheat shall be weighed, and the weight per bushel entered on the inspection book.

( grades were defined for corn, oats, rye, barley  
and peas)



Provisions respecting Grain generally.

No grain that is warm, or is in a heating condition, shall be graded.

In the inspection of grain, the weight shall not alone determine the grade.

All inspectors shall make their reasons for grading grain, when necessary, fully known by notation on their books.



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APPENDIX 3

Excerpt from an

ORDER IN COUNCIL, August 9, 1888

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44 The grades of grain shall be as follows:-

Spring Wheat

Extra Manitoba hard wheat shall be sound and well cleaned, weighing not less than sixty-two pounds to the bushel, and shall be composed of at least eighty-five per cent of hard red Fife wheat, grown in Manitoba or the North West Territories of Canada.

No 1 Manitoba hard wheat shall be sound and well cleaned, weighing not less than sixty pounds to the bushel, and shall be composed of at least two-thirds of hard red Fife wheat, grown in Manitoba or the North West Territories of Canada.

No 2 Manitoba hard wheat shall be sound and reasonably clean, weighing not less than fifty-eight pounds to the bushel, and shall be composed of at least two-thirds of hard red Fife wheat, grown in Manitoba or the North West Territories of Canada.

No 1 hard white Fife wheat shall be sound and well cleaned, weighing not less than sixty pounds to the bushel, and shall be composed of not less than sixty per cent of hard white Fife wheat, grown in Manitoba or the North West Territories of Canada, and shall not contain more than twenty-five per cent of soft wheat.

No 1 Manitoba northern wheat shall be sound and well cleaned, weighing not less than sixty pounds to the bushel, and shall be composed of at least fifty per cent of hard red Fife wheat, grown in Manitoba or the North West Territories of Canada.

No 2 Manitoba northern wheat shall be sound and reasonably clean, of good milling qualities, and fit for warehousing, weighing not less than fifty-eight pounds to the bushel, and shall be composed of at least fifty per cent of hard red Fife wheat, grown in Manitoba or the North West Territories of Canada.



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No 1 Spring wheat	)	
	)	
No 2 Spring wheat	)	
	)	
No 3 Spring wheat	)	
	)	
Rejected spring wheat	)	defined as in 1885
	)	
Goose wheat No 1	)	(see appendix 7)
	)	
Goose wheat No 2	)	
	)	
Goose wheat No 3	)	

### Winter Wheat

All winter wheat grades defined as in 1885

(see appendix 7)

Provisions as to all grains.

No grain that is warm, or is in a heating condition, shall be graded.

No wheat or other grain that has been subject to scouring or treatment by use of lime or sulphur, shall be graded higher than No 3.

In the inspection of grain, the weight shall not alone determine the grade.

All inspectors shall make their reasons for grading grain, when necessary, fully known by notation on their books.

Samples furnished to inspectors shall be made to conform, as strictly as possible, to the conditions and terms specified in the foregoing classification.

The above modifications shall not come into force until the 1st of September, 1888.





## APPENDIX 9

Excerpt from an

ORDER IN COUNCIL, October 14, 1895.

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## Spring Wheat

No 1 Manitoba hard wheat shall consist wholly of wheat grown in Manitoba or the North West Territories of Canada, and shall be sound and well cleaned, weighing not less than sixty pounds to the bushel, and shall be composed of at least two-thirds of hard red Fyfe wheat. No wheat which has been subjected to scouring or brushing for the removal of smut or other fungoid growth, shall be included in this grade.

No 2 Manitoba hard wheat	)	
No 1 hard white Fyfe wheat	)	no change from 1888 except
	)	in arrangement of definition
No 1 Manitoba northern wheat	)	
	)	
No 2 Manitoba northern wheat	)	

Spring wheat	)	
	)	
Goose wheat	)	
	)	
Winter wheat	)	defined as in 1888
	)	
Corn	)	
	)	
Oats	)	
	)	
Rye	)	

Barley (same grade definitions as in 1888 but the following clause was omitted.)

All barley grown in Manitoba or the North West Territories of Canada, shall be graded as above, but shall be distinctly classified by inspectors as "Manitoba" barley.

Peas	)	defined as in 1888
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Provisions as to all Grain

In the inspection of grain, inspectors are to be governed in their interpretation of the foregoing classification by the standard samples selected by the board appointed for that purpose. If, however, they are called upon to grade any wheat, which, as to weight, is not equal to the weight of such standard sample, they are not, if they deem it otherwise equal to the standard sample, to reduce the grade, provided the weight is equal to that required by the legal definition hereinbefore given.

Neither shall the inspectors decline to grade any wheat, other than No 1 Manitoba hard, because it differs in its constituent parts from the standard sample, provided it is, in respect of soundness, cleanliness and the proportion of hard wheat contained therein and its general milling qualities equal to the standard placed in their hands for their governance.

Nor shall the restrictions mentioned in grade one as to scoured or brushed wheat apply to any of the other grades fixed hereby.

(paragraphs 1, 2, 4 and 5 of the 1888 classification continued in 1895)

(paragraph 3 of the 1888 classification omitted)



APPENDIX 10

Excerpt from an

ORDER IN COUNCIL, September 26, 1896.

Spring Wheat

No 1 Manitoba hard wheat shall consist wholly of wheat of wheat grown in Manitoba or the North West Territories of Canada, and shall be sound and well cleaned, weighing not less than sixty-one pounds to the bushel, and shall be composed of at least three fourths of hard red Fyfe wheat.

No 2 Manitoba hard wheat (defined as in 1895 except that the minimum weight is increased from 58 to 58½ lbs per bushel)

No 1 Manitoba northern ( defined as in 1895)

No wheat which has been subject to scouring or brushing for the removal of smut or other fungoid growth shall be included in any of the above mentioned grades.

- |                            |   |                    |
|----------------------------|---|--------------------|
| No 2 Manitoba northern     | ) |                    |
| No 1 hard white Fyfe wheat | ) |                    |
| No 1 Spring wheat          | ) |                    |
| No 2 Spring wheat          | ) | defined as in 1895 |
| No 3 Spring wheat          | ) |                    |
| Rejected spring wheat      | ) |                    |
| Goose wheat No 1           | ) |                    |
| Goose wheat No 2           | ) |                    |
| Goose wheat No 3           | ) |                    |

( grades of all other grain defined as in 1895 )





Chart # 1

WHEAT PRODUCTION AND INSPECTION

Production —  
Inspection —

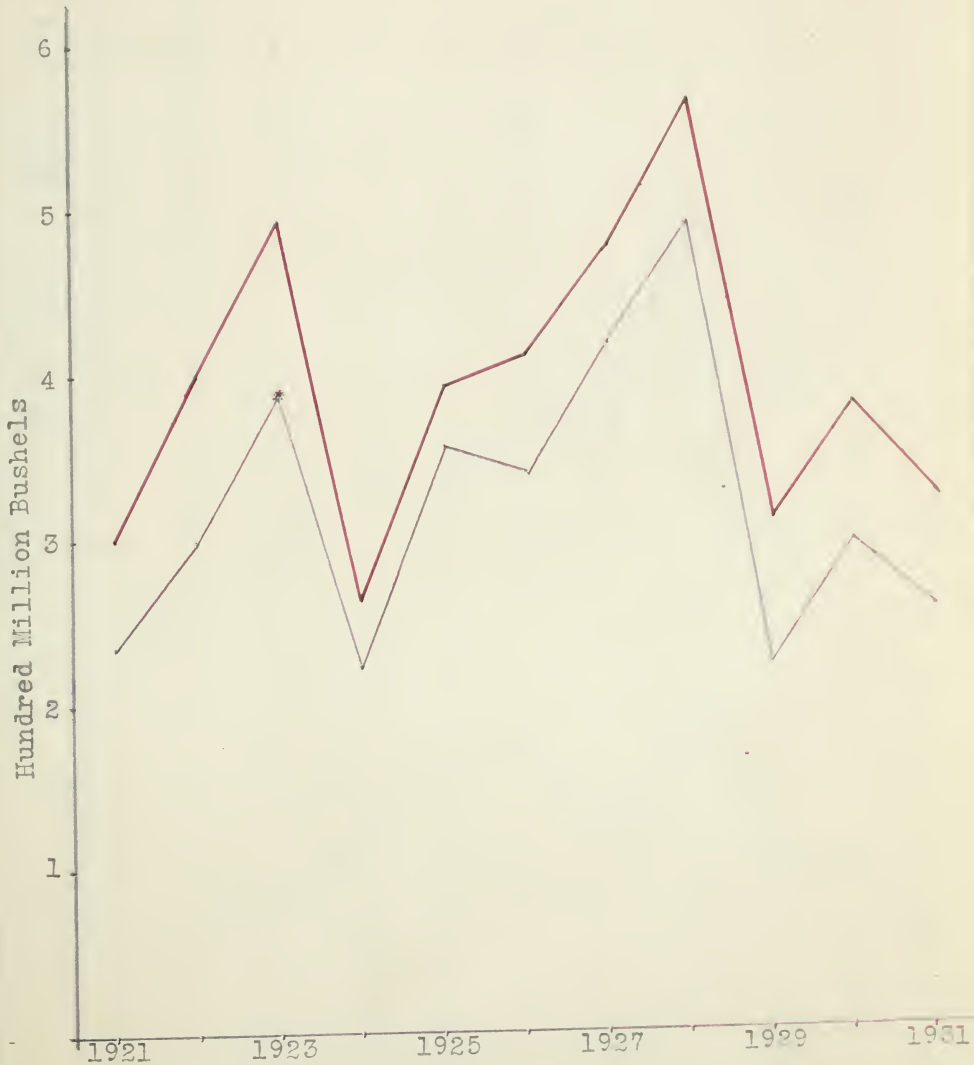




Chart # 2

BARLEY PRODUCTION AND INSPECTION

Production —  
Inspection —

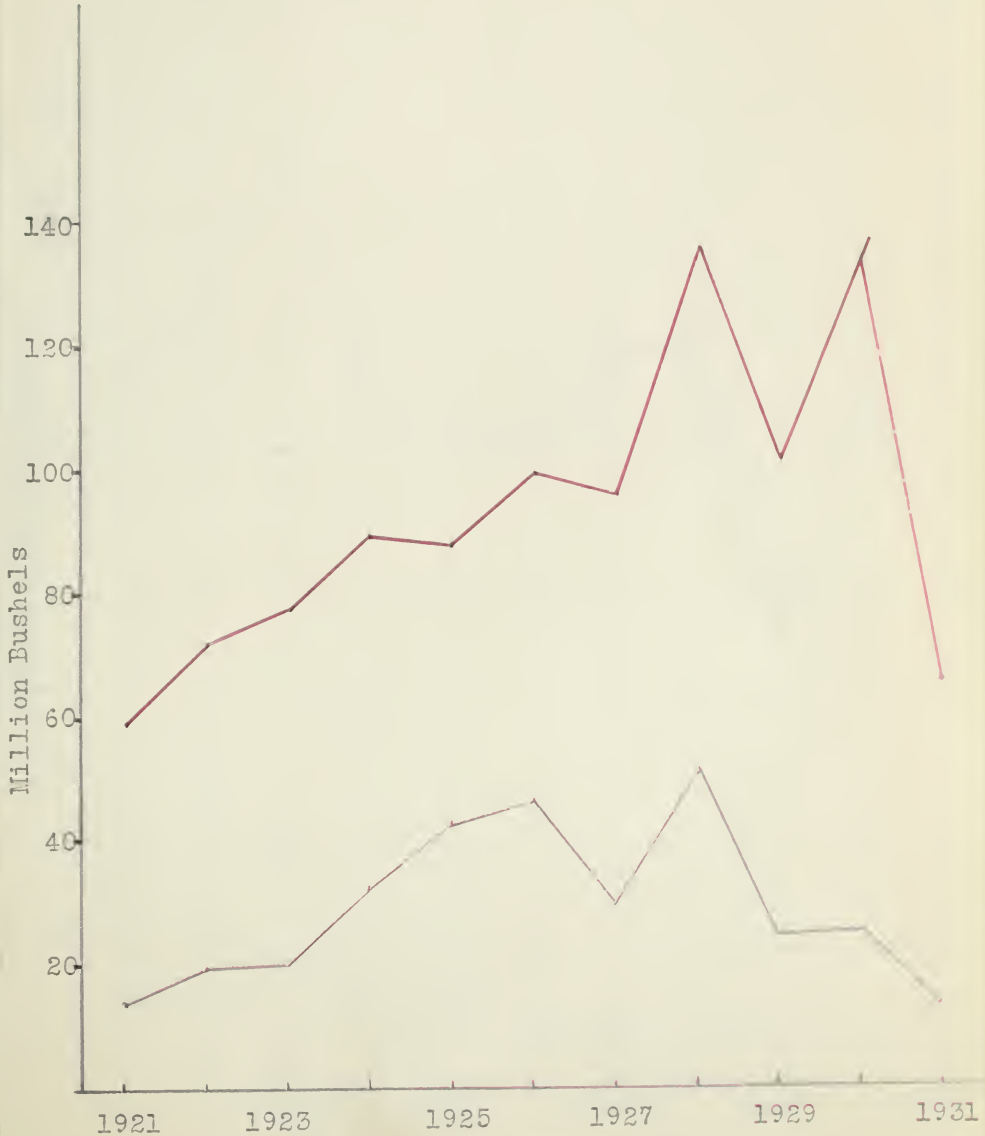




Chart # 3

OATS PRODUCTION AND INSPECTION

Production —  
Inspection —





Chart # 4

## RYE PRODUCTION AND INSPECTION

Production —  
Inspection —

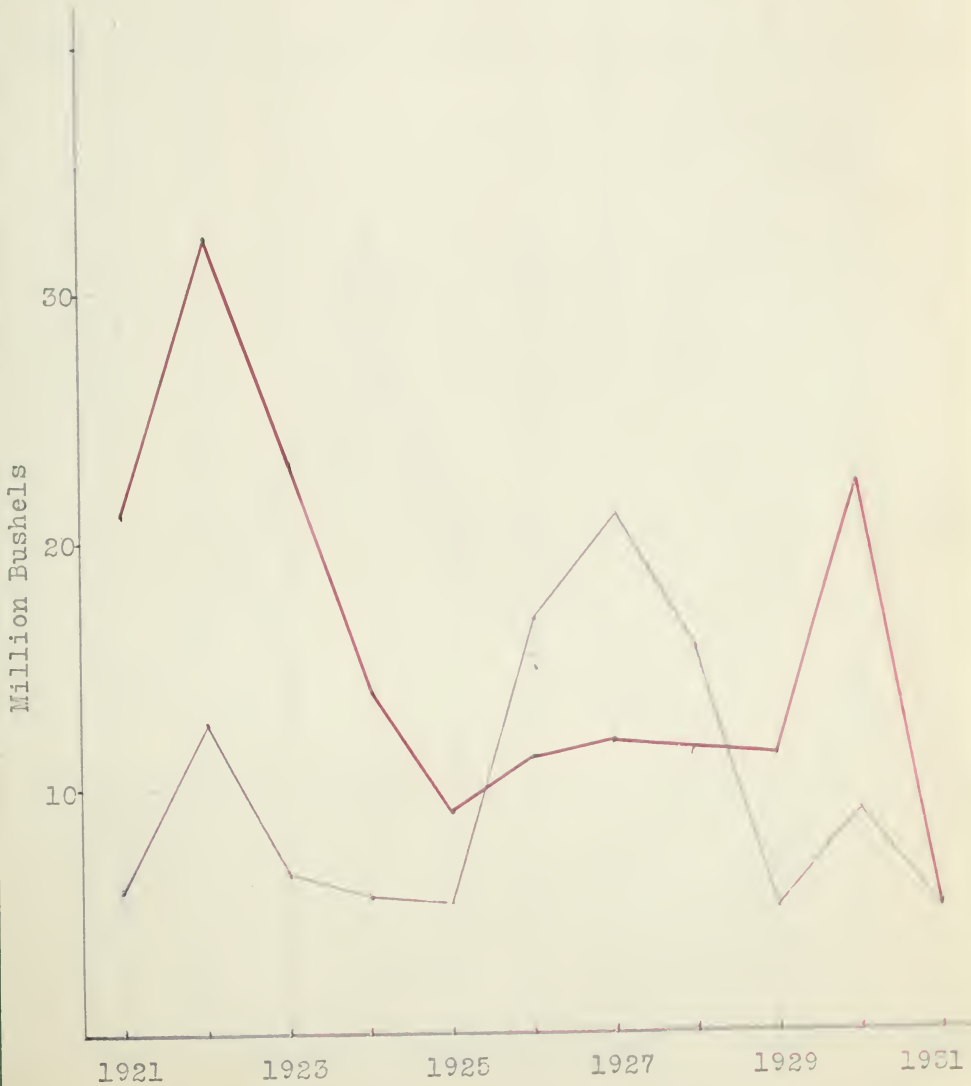






Chart # 5

## FLAX PRODUCTION AND INSPECTION

Production —  
Inspection —





Chart # 8

BUCKWHEAT PRODUCTION AND INSPECTION

Production —  
Inspection —

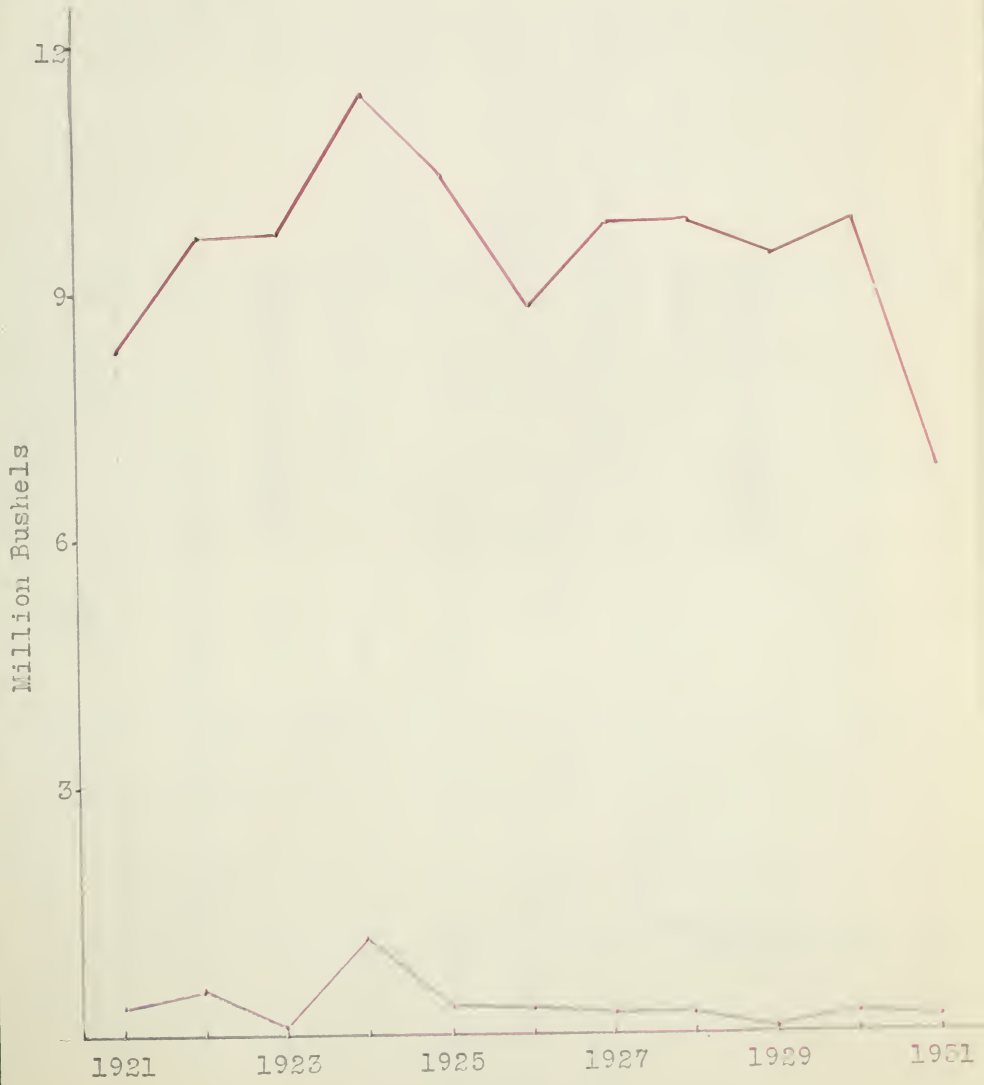










Table 1  
 TRADE IN FLOUR OF PORTS OF NOVA SCOTIA,  
 1807, 1814, 1821 and 1828 (1)

Year	Imports	Exports
1807	30,136 bbls.	2,989 bbls.
1814	5,523 "	3,850 "
1821	60,446 "	15,742 "
1828	77,094 "	26,721 "

(1) Compiled from data presented by Thos. C. Haliburton in "Historical and Statistical Account of Nova Scotia", 1829, v 2, p 388.



Table 2

STANDARD WEIGHT PER BUSHEL OF THE DIFFERENT  
KINDS OF GRAIN AND THE DATE ESTABLISHED (1)

	Nova Scotia	Upper Canada		Dominion of Canada	
	1792 c 4	1835 c 7	1853 c 193	1873 c 47	1898 c 30
Barley	48	48			
Buckwheat			48		
Corn	58	56			
Flax				50	56
Oats	34	34			
Peas	60	60			
Rye	56	56			
Wheat	58	60			

(1) Compiled from statutes of the Legislatures.



Table 3

PRICE PER BUSHEL ON THE LAST MARKET DAY OF  
EACH MONTH. TORONTO, 1863, (1)

	Fall Wheat	Spring Wheat
January	\$0.95	\$0.84
February	.96	.84
March	.92	.82
April	.90	.88
May	.99	.87
June	.94	.85
July	.88	.82
August	.90	.85
September	.90	.80
October	1.00	.78
November	1.02	.82
December	1.04	.82
Average	.95	.83

(1) Michell, H.; Statistics of Prices, Statistical Contributions to Canadian Economic History, v 2, p 69.



Table 4. CHANGES IN STATUTORY GRADES OF WHITE WINTER WHEAT (Eastern)

1863	1873	1885	1925	1930
No 1 W.W. sound, plump, free from other other grain	No 1 W.W. pure white, sound, plump, well cleaned	<del>Extra W.W. pure white, choice in color, sound, plump, well cleaned 62 lbs. No 1 W.W. pure white, sound, plump, well clean- ed, 60 lbs.</del>	No 1 W.W. pure white, sound, plump, well cleaned, 60 lbs.	No 1 W.W. white, sound, plump, clean, 5% other wheat 60 lbs
No 2 W.W. sound, good, less free from other grain	No 2 W.W. pure white sound reasonably clean	No 2 W.W. white, sound, reasonably clean, 58 lbs	No 2 W.W.	No 2 W.W. white, sound, reasonably clean, 10% other wheat, 58 lb
Rejected unsound, damp, very dirty	No 3 Winter not clean & plump enough for No 2, 55 lbs.	No 3 Winter not plump or clean enough for No 2, 37 lbs.	No 3 Winter not clean or plump enough for No 2, 56 lbs.	No 3 Winter winter sound reasonably clean 56 lbs.
	Rejected Winter damp, musty, from any cause so badly damaged to be unfit for No 3	Rejected Winter damp, musty, from any cause so badly damaged to be unfit for No 3 No Grade Contaminated	Rejected included in commercial grades	No 4 Winter winter sound reasonably clean 56 lbs.





Table 5 CHANGES IN STATUTORY GRADES OF RED WINTER WHEAT (Tastern)

1863	1873	1885	1904	1920
<u>No 1 Red W.</u> sound, plump, free from other grain	<u>No 1 Red Winter</u> red or R. & W. mixed sound, plump, well cleaned.	<u>No 1 Red Winter</u> pure red, sound, plump, well cleaned, 62 lbs.	<u>No 1 Red Winter</u> pure red, sound, plump, clean 60 lbs	<u>No 1 Red Winter</u> pure red, sound, plump, clean, 60 lbs, 5% other wheat.
<u>No 2 Red W.</u> sound, good, less free from other grain.	<u>No 2 Red Winter</u> red or red and white mixed, sound, reasonably clean	<u>No 2 Red Winter</u> pure red, sound, reasonably clean, 60 lbs	<u>No 2 Red Winter</u> pure red, sound, plump, reasonably clean, 10% other wheat, 58 lbs.	

For lower grades see White Winter Wheat classification.



Table 6. CHANGES IN STATUTORY GRADES OF MIXED WINTER WHEAT (Eastern)

1873	1885	1899	1904	1920
mixed wheats classed as red	No 1 Mixed Winter white & red mixed, sound, plump, well cleaned, 62 lbs.	No 1 Mixed Winter	No 1 Mixed Winter white & red mixed sound, plump, well cleaned, 61 lbs. (60 lbs in 1925)	No 1 Mixed Winter white & red mixed sound, plump, clean, 58 lbs, 5% other wheats
	No 2 Mixed Winter white & red mixed, sound, reasonably clean, 59 lbs.	No 2 Mixed Winter white & red mixed sound and plump, reasonably clean, 59 lbs	No 2 Mixed Winter white & red mixed, sound and plump, reasonably clean, 59 lbs (58 lbs in 1925)	No 2 Mixed Winter white & red mixed, sound, plump, reasonably clean, 58 lbs, 10% other wheats.

For lower grades see white winter wheat classification.



Table 7. CHANGES IN STATUTORY GRADES OF SPRING WHEAT (Eastern)

1863	1873	1874	1885	1904	1930
extra Spring sound plump free from other grain, 51 lbs	No 1 Spring plump, well cleaned	No 1 Spring	No 1 Spring sound, well cleaned, 60 lbs	No 1 Spring sound, clean, 60 lbs	No 1 Spring
No 1 Sr. Bright No 1 Spring sound, free from other grain, 59 lbs	No 1 Spring well cleaned	No 1 Spring	No 1 Spring	No 1 Spring	No 1 Spring
No 2 Spring sound less free from other grain 57 lbs	No 2 Spring sound, reasonably clean, 56 lbs	No 2 Spring sound, reasonably clean, 58 lbs	No 2 Spring	No 2 Spring	No 2 Spring
Rejected unsound, damp, dirty very dirty	No 3 Spring reasonably clean, not enough for 2, 54 lbs	No 3 Spring reasonably clean, not good enough for 2, 55 lbs	No 3 Spring reas. clean, not good enough for 2, 56 lbs for 2, 56 lbs	No 3 Spring fit for ware- housing, not good enough for 2, 56 lbs	No 3 Spring sound, reas. clean, 56 lbs
	Rejected damp, musty, prolonged, cleaned, any other cause unfit for 2	Rejected	Rejected fit for ware- housing, too damp, or other- wise unfit for No 3	Rejected	No 4 Spring fit for warehousing





Table 8. CHANGES IN STATUTORY GRADES OF GOOSE WHEAT

1885	1930
<p><u>No 1 Goose Wheat</u></p> <p>plump, well cleaned, 61 lbs.</p>	<p><u>No 1 Goose Wheat</u></p> <p>sound, plump, clean, 61 lbs.</p>
<p><u>No 2 Goose Wheat</u></p> <p>plump, reasonably well cleaned, 59 lbs</p>	<p><u>No 2 Goose Wheat</u></p> <p>sound, reasonably clean, 59 lbs</p>
<p><u>No 3 Goose Wheat</u></p> <p>not good enough for No 2, reasonably clean, 55 lbs</p>	<p><u>No 3 Goose Wheat</u></p> <p>reasonably sound, reasonably clean, 55 lbs</p>
	<p><u>No 4 Goose Wheat</u></p> <p>fit for warehousing</p>







Table 10. CHANGES IN STATUTORY GRADES OF MANITOBA NORTHERN WHEAT

1885	1888	1896	1899	1904	1925	1930
MANITOBA HARD WHEAT GRADES						
<u>No 1 Nor. Spr</u>	<u>No 1 Man. Nor</u>	<u>No 1 Man. Nor</u>	<u>No 1 Northern</u>	<u>No 1 Northern</u>	<u>No 1 Northern</u>	<u>No 1 Northern</u>
<u>No 2 Nor. Spr</u>	<u>No 2 Man. Nor</u>	<u>No 2 Man. Nor</u>	<u>No 2 Northern</u>	<u>No 2 Northern</u>	<u>No 2 Northern</u>	<u>No 2 Northern</u>
<u>No 3 Nor. Spr</u>				<u>No 3 Northern</u>	<u>No 3 Northern</u>	<u>No 3 Northern</u>
					<u>No 4 Northern</u>	





Table 11. CHANGES IN STATUTORY GRADES OF  
WINTER WHEAT (Western)

1906	1912	1930
<u>No 1 A.R.W.</u> hard, pure red, sound, clean, 62 lbs	<u>No 1 A.R.W.</u> hard, pure red, sound, clean, 62 lbs	<u>No 1 A.R.W.</u> 60% hard kernels red winter, 62 lbs, well matured, prac free of damage, free from foreign matter, 1% cereal grains, 5% other wheats
<u>No 2 A.R.W.</u> hard, red winter, sound, clean, 60 lbs	<u>No 2 A.R.W.</u>	
<u>No 3 A.R.W.</u> hard, red winter, not clean and sound enough for No 2, 57 lbs.	<u>No 3 A.R.W.</u>	<u>No 2 Alberta Winter</u> 60 lbs, red or white 45% hard kernels, well matured, prac free from damaged kernels, reas free foreign matter, 2% cereal grains, 1% durum 10% other wheats
	<u>No 1 A.W.W.</u> pure white, sound, clean, 60 lbs	
	<u>No 2 A.W.W.</u> pure white, sound, clean, 58 lbs	<u>No 3 Alberta Winter</u>
	<u>No 3 A.W.W.</u> white winter, not clean and sound enough for No 2, 56 lbs	57 lbs, red or white reas well matured, damaged kernels, reas free from foreign matter, 2% cereal grains, 2% durum, 20% other wheats
	<u>No 1 A.M.W.</u> red & white, sound, plump, clean, 61 lbs, 50% red wheat	
	<u>No 2 A.M.W.</u> red & white, sound, plump, clean, 59 lbs	





Table 12. CHANGES IN STATUTORY GRADES OF AMBER  
DURUM WHEAT

1925	1930
<u>No 1 C.W.Amber Durum</u> sound, clean, 62 lbs, 75% hard amber kernels, 5% spring or winter wheat, 5% red durum	<u>No 1 C.W.Amber Durum</u> Minimum or equal; well matured; prac, free from damaged kernels; 62 lbs; 75% hard amber kernels; free of foreign matter; 1% other grain; free of red durum; 5% other wheat.
<u>No 2 C.W.Amber Durum</u> sound, reasonably clean, 60 lbs, 60% hard amber kernels, 10% spr & winter wheat, 10% red durum	<u>No 2 C.W.Amber Durum</u> Minimum or equal; well matured; prac free of damaged kernels; 60 lbs; 60% hard amber kernels; free of foreign matter; 1% other grain; 5% red durum; 15% other wheat.
<u>No 3 C.W.Amber Durum</u> reas sound, reas clean, 58 lbs, 45% hard amber kernels, 15% spring & winter wheat, 10% red durum	<u>No 3 C.W.Amber Durum</u> reas well matured, 58 lbs, reas free of damaged kernels, 30% hard vitreous kernels, free of foreign matter, 2% cereal grains, 10% red durum, 15% other wheat
<u>No 4 C.W.AMBER Durum</u> reas clean, 55 lbs, 20% spring & winter wheat 10% red durum	<u>No 4 C.W.Amber Durum</u> 56 lbs, reas well matured, frosted & damaged, reas free of foreign matter, 2% foreign matter & cereal grains, 10% red durum, 30% other wheat
<u>No 5 C.W.Amber Durum</u> reas clean, 55 lbs, 25% spring & winter wheat, 10% red durum	<u>No 5 C.W.Amber Durum</u> 54 lbs, frosted or otherwise damaged kernels, reas free of foreign matter, 2% cereal grains & foreign matter, 10% red durum, 25% other wheats.
<u>No 6 C.W.Amber Durum</u> Unfit for No 5	<u>No 6 C.W.Amber Durum</u> damaged & light weight, reas free of foreign matter & cereal grains, 10% red durum, 30% other wheat









Table 14. CHANGES IN STATISTICAL GRADES OF  
OATS (Western)

1904	1912	1950
<u>Ex 1 Manitoba</u>	<u>Ex 1 C.W.</u>	
38 lbs	42 lbs	<u>No 1 C.W.</u>
<u>No 1 Manitoba</u>	<u>No 1 C.W.</u>	38 lbs
35 lbs	36 lbs	
<u>No 2 Manitoba</u>	<u>No 2 C.W.</u>	<u>No 2 C.W.</u>
34 lbs		36 lbs
<u>No 3</u>	<u>No 3 C.W.</u>	<u>No 3 C.W.</u>
	<u>Ex 1 Feed</u>	<u>Special Feed</u>
		<u>Ex 1 Feed</u>
	<u>No 1 Feed</u>	<u>No 1 Feed</u>
	<u>No 2 Feed</u>	<u>No 2 Feed</u>
		<u>No 3 Feed</u>
		<u>Mixed Feed Oats</u>





Table 15. CHANGES IN STATUTORY GRADES OF  
BARLEY (Eastern.)

1863	1873	1874	1885
<u>No 1</u> plump, sound, bright, well cleaned,	<u>No 1</u> clean, free from other grain.	<u>No 1</u>	<u>No 1</u>
<u>No 2</u> sound, clean,	<u>No 2</u> reas clean, free from other grain	<u>No 2</u>	<u>No 2</u> 48 lbs
			<u>No 3 2x</u> same as No 2 except in color, 47 lbs
<u>Rejected</u> unsound, damp, very dirty	<u>No 3</u> shrunken, slight damage, 42 lbs,	<u>No 3</u> 43 1/2 lbs	<u>No 3</u> 45 lbs
			<u>No 4</u> equal to No 3 but weighing less than 45 lbs
	<u>Rejected</u>	<u>Rejected</u>	



Table # 16 CHANGES IN STATUTORY GRADES TRADES (Western)

1904	1912	1920		
<u>No 1 Man.</u> plump, sound, bright, clean, free from other grain, 45 lbs	<u>No 1 N.W.</u>	<u>1 CW Grow</u> 50 lbs O.A.C. 21	<u>1 CW Trade</u> 50 lbs Trade	<u>1 CW &amp; Row</u> 50 lbs Two Row
		sound, 91% pure, no seeds, no wild oats, } total free from other grain } free		
<u>No 2 Man</u> SOUND, reas clean, reas free from other grain, 48 lbs	<u>No 2 CW</u>	<u>2 CW Grow</u> 49 lbs O.A.C. 21	<u>2 CW Trade</u> 49 lbs Trade	<u>2 CW &amp; Row</u> 50 lbs Two Row
		sound, 87% pure, 1% seeds, 1% wild oats, } total 1% 1% other grain		
<u>No 3 Ex Man</u> same as 2 except color	<u>No 3 Ex CW</u>	<u>3 Ex CW Grow</u> O.A.C. 21	<u>3 Ex CW Trade</u> Trade	<u>3 Ex CW &amp; Row</u> Two Row
		sound, 90% pure, 48 lbs 1% seeds, 1% wild oats, } total 1% 1% other grain		
<u>No 3 Man</u> shrunken, slight damage, 45 lbs	<u>No 3 CW</u>	<u>No 3 CW</u> 47 lbs, any variety, slight frost, immature, weather stained, shrunken, damaged, sweet. 12% seeds, 6% wild oats, } total 6% 6% other grain		
<u>No 4 Man</u> equal to 3 except in weight	<u>No 4 CW</u>	<u>No 4 CW</u> 46 lbs, damaged, stained, sweet, 3% seeds, 10% wild oats, } total 10% other grain		
<u>Rejected</u> damp, musty, badly damaged, mixed with other grain		<u>No 5 CW</u> 42 lbs, damaged, badly weathered, 4% seeds, 15% wild oats, } total 18% other grain		
		<u>No 6 CW</u> excluded on acct of weight, admixtures; up to 5% heat damage, 3% seeds, 25% wild oats, } total 25% other grain		
No Rejected in statutory grades				



Table # 1 Changes in statutory grades of eastern rye.

1863	1873	1904	1930
<u>No. 1 RYE</u> sound well cleaned	<u>No. 1 Rye</u> sound well cleaned plump	<u>No. 1 RYE</u> sound. clean 58 lbs.	<u>No. 1 RYE</u> sound. clean 58 lbs.
	<u>No. 2 RYE</u> sound reas. clean (reas. free other grain)	<u>No. 2 RYE</u> sound reas. clean (reas. free other grain) 56 lbs.	<u>No. 2 RYE</u> sound reas. clean (reas. free other grain) 56 lbs.
<u>No. 2 RYE</u> (too dirty for No 1)	<u>REJECTED</u> (unfit for No. 2)	<u>No. 3 RYE</u> sound 55 lbs (too dirty for No 2)	<u>No. 3 RYE</u> sound 55 lbs
		<u>REJECTED</u> (unfit for No. 3 )	<u>No. 4 RYE</u> damaged





Table # 17 Changes in statutory grades of western rye.

1904	1912	1925	1930
<u>No. 1 Man.</u>	<u>No. 1 C.W.</u>	<u>No. 1 C.W.</u>	<u>No. 1 Canada Western</u>
sound (well cleaned) plump	sound (well cleaned) plump	sound (well cleaned) plump 58 lbs.	sound well cleaned free of ergot 58 lbs.
<u>No. 2 MAN.</u>	<u>No. 2 C.W.</u>	<u>No. 2 C.W.</u>	<u>No. 2 Canada Western</u>
sound reas. clean (reas. free other grain)	sound reas. clean (reas. free other grain)	sound reas. clean (reas. free other grain) 56 lbs.	sound prac. free of ergot 56 lbs. 3% foreign matter (1) 1% grain not wheat 2% for. matter & grain
<u>REJECTED</u> (unfit for No 2)	<u>REJECTED</u> (unfit for No 2)	<u>No. 3 C.W.</u>	<u>No. 3 Canada Western</u>
		(not sound enough for No 2) reas. clean 5% wheat (1) 5% barley 55 lbs.	sound slight damage 1/3% ergot (1) 1% foreign matter 3% grain not wheat 5% for. matter & grain 55 lbs.
		<u>REJECTED</u> (unfit for No 3)	<u>No. 4 Canada Western</u>
			damaged 5% heat damage (1) 1/3% ergot 2% foreign matter 7% grain not wheat 10% for. matter & grain
			<u>ERGOTY RYE</u> (excluded from preceed- ing grades on account of ergot) over 1/3% ergot
(1) maximum limits.			<u>ERGOTY RYE &amp; OTHER GRAIN</u>



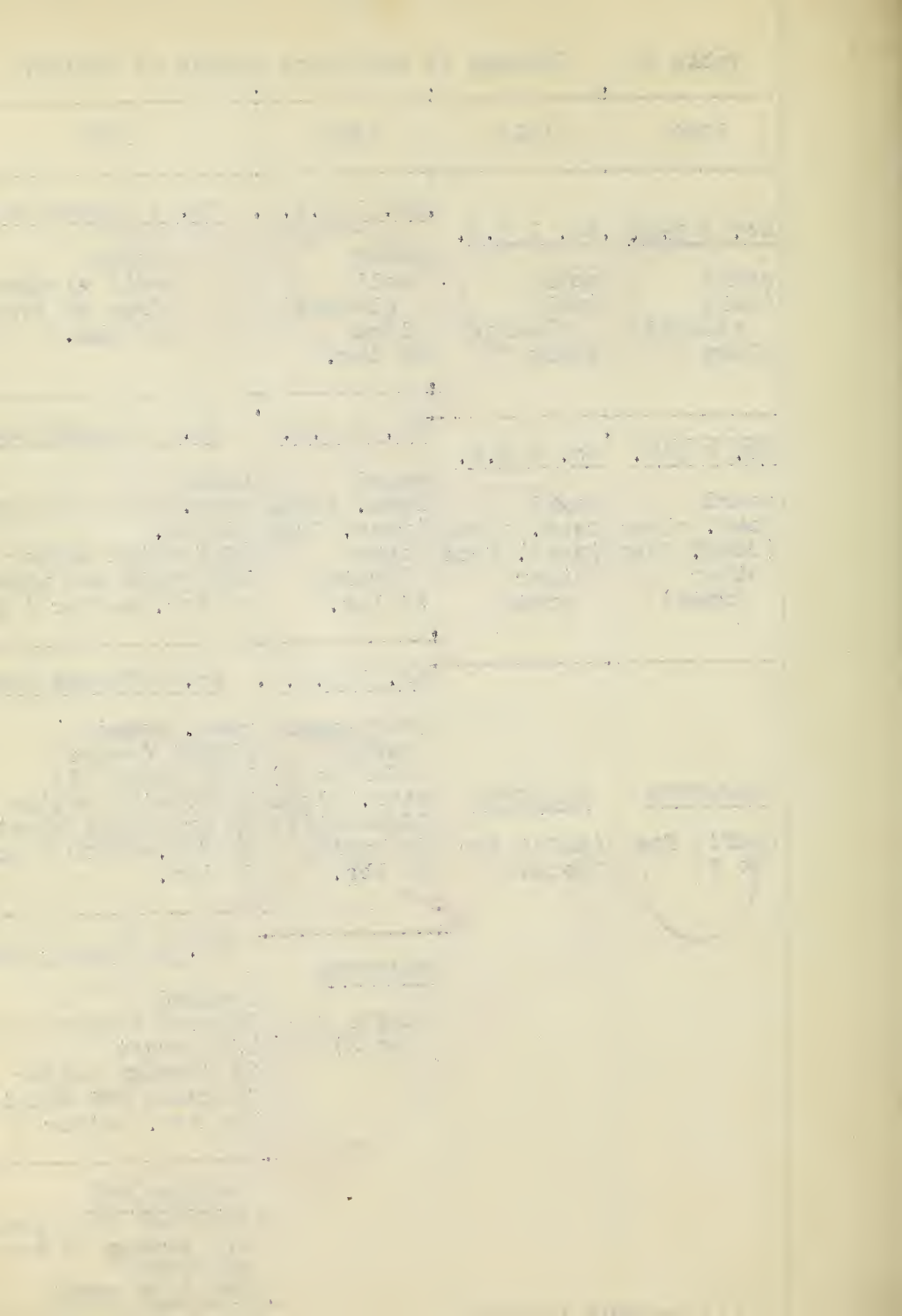


Table # 19. Changes in Statutory Grades of Peas.

1913	1980	1904	1913	1970
<u>No. 1</u> clean sound white	<u>No. 1</u>  not worm eaten free from bugs	<u>No. 1</u>  free from bugs	<u>No. 1</u>  64 lbs	<u>No. 1 &amp; 1 1/2</u>
<u>No. 2</u> sound mixed	<u>No. 2</u>  Mod. clean	<u>No. 2</u>  Peas. clean peas free from worm eaten & buggy per	<u>No. 2</u>  62 lbs	<u>No. 2 White</u> peas sound  white
<u>Rejected</u> unsound damp very dirty	<u>No. 3</u> too dirty for No. 2 worm eaten	<u>No. 3</u>	<u>No. 3</u>  60 lbs	<u>No. 3 White</u> worm eaten or buggy
	<u>Rejected</u> damp, worm eaten or otherwise unfit for #3			
		Marrowfat Grades 1, 2 and 3 same as above		
		<u>Mixed Peas</u> sound	<u>Mixed Peas</u> sound	<u>Mixed Peas</u> 3 grades defined as for white except for color



Table No. 20. Changes in Statutory Grades of Corn.

1863	1873	1904	1912	1930
<u>Pure White</u>	<u>White Corn</u> white	<u>No. 1 White</u> sound, dry clean	16% moisture	<u>No. 1 White</u> cool and sweet under 5% other corn 57 lbs
.(see mixed corn)	(see No. 1 Corn)	<u>No. 2 White</u> white, dry sound reasonably clean	16% moisture	<u>No. 2 White</u> cool & sweet, 56 lb under 5% other corn
	(see No. 2 Corn)	<u>No. 3 White</u> white, sound, dry, unfit for No. 2	19% moisture	<u>No. 3 White</u> cool & sweet, 53 lb under 5% other corn
<u>Pure Yellow</u>	<u>Yellow Corn</u> yellow	<u>No. 1 Yellow</u> ) <u>No. 2 Yellow</u> ) <u>No. 3 Yellow</u> )	same definitions as for (white except as to color	
<u>Mixed</u>	<u>No. 1 Corn</u> sound, dry, mixed, plump, well cleaned	<u>No. 2 Corn</u> sound, mixed, dry, reas clean	16% moisture	<u>No. 1 Mixed</u> cool & sweet, 57 lb under 5% other corn
	<u>No. 2 Corn</u> dry, mixed, reas clean, not plump enough for No 1	<u>No. 3 Corn</u> dry, mixed, reas clean,	16% moisture	<u>No. 2 Mixed</u> cool & sweet, 56 lbs under 5% other corn
<u>Rejected</u>	<u>Rejected</u>	<u>Rejected</u>		<u>No. 3 Mixed</u> Mixed, cool, sweet, under 5% other corn reas clean, 55 lbs, 19% moisture



Table F 21. Changes in Statutory Grades of Buckwheat.

Eastern Division		Western Division	
1904	1930	1933	1930
<u>No. 1</u> sound, clean, dry, free from other grain, 50 lbs	<u>No. 1</u> sound, dry, clean, 50 lbs	<u>No. 1 C.W.</u> sound, clean, free from other grain, 50 lbs	<u>No. 1 C.W.</u> well matured, free from damage & foreign matter, 50 lbs
<u>No. 2</u> sound, clean, dry, 48 lbs	<u>No. 2</u> sound, dry, clean, 48 lbs	<u>No. 2 C.W.</u> sound, clean, reus free from other grain, 48 lbs	<u>No. 2 C.W.</u> well matured, reus free from damage, free of wild oats, 2% other grain, 2% total foreign matter, 48 lbs
<u>No. 3</u> sound, not clean enough for No. 2, 45 lbs	<u>No. 3</u> reus sound, 45 lbs	<u>No. 3 C.W.</u> reus sound, reus clean, reus free from other grain, 45 lbs	<u>No. 3 C.W.</u> reus well matured, reus free from damage & wild oats, 3% other grain, 4% total foreign matter, 45 lbs.
<u>No Grade</u> damp, fit for warehousing, too dirty for No. 3	<u>No. 4</u> damaged	<u>Rejected</u>	<u>No. 4 C.W.</u> damaged, 5% heat damage, free of seeds, reus free of wild oats, 5% other grain, 5% total foreign matter
<u>No Established Grade</u>			





Table # 32 Changes in statutory grades of flax

1900	1904	1912	1930
<u>No. 1 Manitoba</u> 55 lbs 10% damage	<u>No. 1 NW Man.</u> 55 lbs 12% damage	<u>No. 1 N.W. Can.</u> 55 lbs 12% damage	<u>No. 1 C.W.</u> 55 lbs 12% damage
<u>No. 2 Manitoba</u> 50 lbs 20% damage	<u>No. 1 Manitoba</u> 55 lbs 8% damage	<u>No. 2 C.W.</u> 50 lbs 25% damage	<u>No. 2 C.W.</u> 50 lbs 25% damage
<u>Rejected</u> over 20% damage	<u>Rejected</u> 49 lbs over 25% damage	<u>No. 3 C.W.</u> 47 lbs over 25% damage	<u>No. 3 C.W.</u> 47 lbs up to 5% heat damage
		<u>Rejected</u> under 47 lbs	<u>No. 4 C.W.</u> up to 10% heat damage
			<u>Rejected</u>

Black - grade definitions  
 Red - trend of grade changes

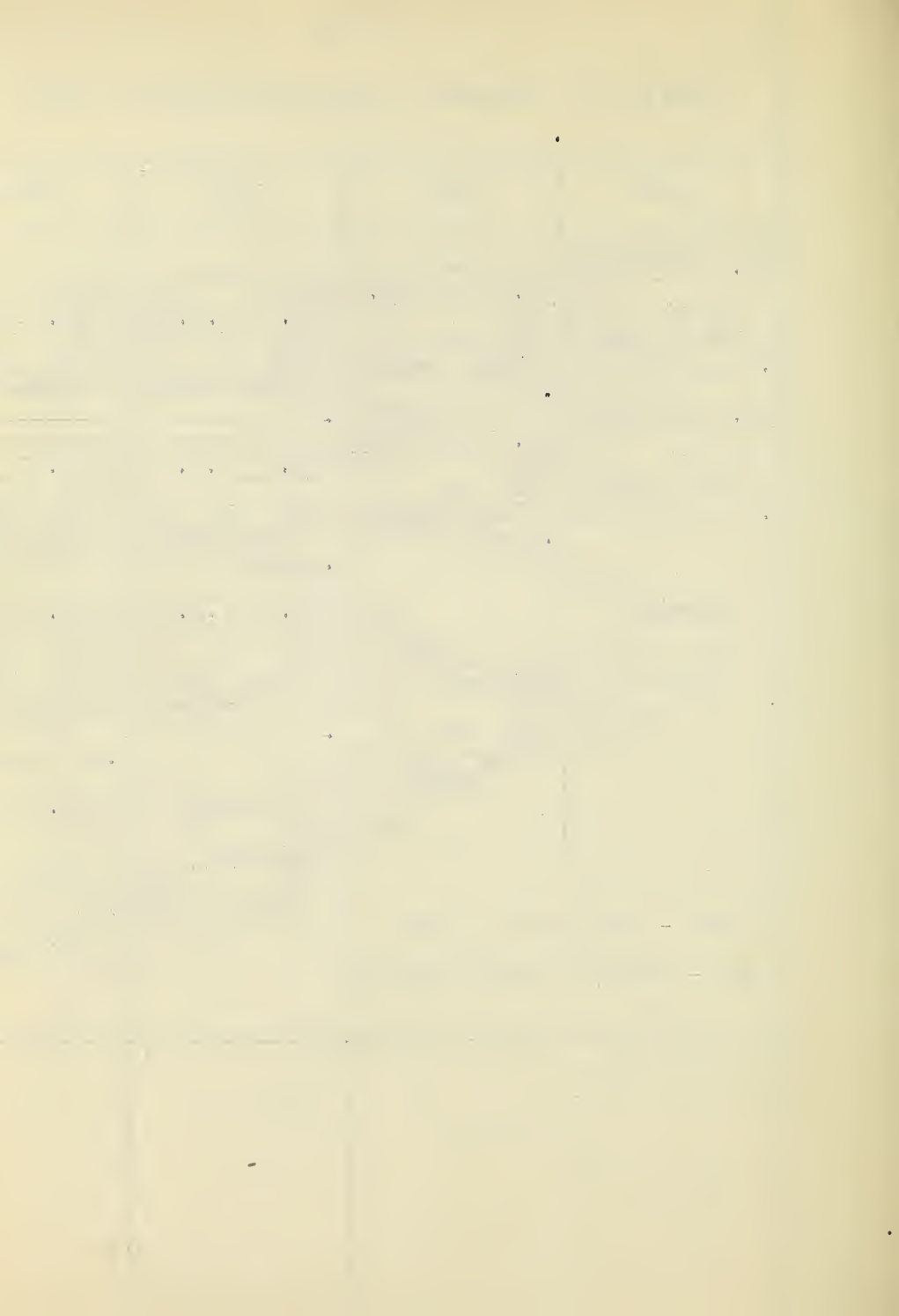


Table # 23. Wheat production in Canada prior to Confederation. (1)

	1754	1842	1844	1848	1851 - 52	1850-51
P.E.I.	*	*	*	*	*	246,100
Nova Scotia	*	*	*	*	237,157	312,051
New Brunswick	*	*	*	*	206,635	272,770
Upper Canada	*	3,221,989	*	7,558,772	12,652,350	24,620,420
Lower Canada	734,892	*	942,829	*	3,073,943	2,656,352
					16,200,265	28,212,700

(1) Compiled from census returns.

\* Not reported.



Table # 24. Oat production in Canada prior to Confederation (1)

	1734	1842	1844	1848	1851 - 52	1860 - 61
P.E.I.	*	*	*	*	*	2,219,579
Nova Scotia	*	*	*	*	1,384,437	1,978,137
New Brunswick	*	*	*	*	1,411,154	2,656,382
Upper Canada	*	4,789,167	*	7,055,730	11,295,467	21,280,870
Lower Canada	162,999	*	7,228,744	*	5,277,400	17,831,292
					23,168,148	45,685,764

(1) Compiled from census returns.

\* Not reported.



Table # 25. Farley production in Canada prior to Confederation (1)

	1754	1842	1844	1848	1851 - 52	1850 - 52
r.E.I.	*	*	*	*	*	227,195
Nova Scotia	*	*	*	*	190,597	269,578
New Brunswick	*	*	*	*	74,500	24,679
Upper Canada	*	1,031,234	*	515,727	625,452	2,021,862
Lower Canada	2,462	*	1,195,447	*	495,760	2,201,674
					1,394,615	5,691,089

(1) Compiled from census returns.

\* Not reported.





Table # 26. Rye production prior to Confederation. (1)

	1724	1743	1744	1748	1851 - 52	1860 - 61
P.E.I.	*	*	*	*	*	*
Nova Scotia	*	*	*	*	61,438	29,708
NEW Brunswick	*	*	*	*	*	*
Upper Canada	*	292,969	*	446,293	172,429	375,181
Lower Canada	*	*	*	325,422	225,422	541,198
					859,289	1,377,079

(1) Compiled from census returns.

\* Not reported.



Table # 27. Production of Fens prior to Confederation (1).

	1734	1842	1844	1849	1851 - 52	1860 - 61
U.T.I.	*	*	*	*	*	*
Nova Scotia	*	*	*	*	*	21,535
New Brunswick	*	*	*	*	42,662	85,449
Upper Canada	*	1,191,550	*	1,752,034	2,027,681	9,621,396
Lower Canada	67,449	*	1,213,413	*	1,415,106	8,646,777
					4,405,469	12,896,955

(1) Compiled from census returns.

\* Not reported.



Table # 26. Corn production prior to Confederation (1).

	1734	1842	1844	1848	1851 - 52	1860 - 61
P.E.I.	*	*	*	*	*	*
Nova Scotia	*	*	*	*	37,475	15,529
New Brunswick	*	*	*	*	62,225	17,420
Upper Canada	*	691,359	*	1,137,750	1,468,800	2,276,290
Lower Canada	5,225	*	141,000	*	401,334	284,831
					2,180,789	3,624,100

(1) Compiled from census returns.

\* Not reported.





Table # 29. Buckwheat Production prior to Confederation (1)

	1842	1844	1848	1851	1860
U.S.I.	*	*	*	*	50,127
Nova Scotia	*	*	*	170,301	187,246
New Brunswick	*	*	*	809,702	804,301
Upper Canada	252,796	*	152,573	379,534	1,846,257
Lower Canada	*	274,801	*	539,112	1,260,096
				2,071,252 (2)	3,448,452

(1) Compiled from census returns.

(2) Incomplete.

\* Not reported.



Table A-20. Wheat production in Canada.

Year	Average 000 ac.	Prod'n 000 bu.	Year	Average 000 ac.	Prod'n 000 bu.
1869		21,758	1901		22,705
1869		21,705	1902		27,529
1870	1,547	16,754	1907		78,486
1871		22,122	1904		53,223
1872		22,909	1905		100,027
1873		22,152	1906		122,501
1874		22,322	1907		17,101
1875		25,452	1908	6,010	112,454
1876		22,211	1909	7,750	116,755
1877		25,572	1910	8,822	137,272
1878		30,032	1911	11,121	220,221
1879		34,022	1912	15,227	224,170
1880	2,367	32,250	1913	11,015	131,717
1881		38,000	1914	16,224	141,220
1882		47,232	1915	15,122	222,220
1883		30,221	1916	15,270	222,221
1884		45,443	1917	14,722	122,721
1885		42,610	1918	17,224	127,272
1886		28,222	1919	19,122	122,220
1887		32,034	1920	12,222	222,122
1888		32,245	1921	22,221	222,222
1889		20,272	1922	22,422	222,222
1890	2,701	42,222	1923	21,222	222,122
1891		42,145	1924	22,022	222,022
1892		42,122	1925	20,720	222,122
1893		41,247	1926	22,222	222,122
1894		42,220	1927	24,420	172,220
1895		41,066	1928	24,119	222,220
1896		22,270	1929	25,222	222,222
1897		47,112	1930	24,222	272,122
1898		22,222	1931	26,220	222,222
1899		22,211	1932	27,122	222,221
1900	4,222	25,572	1933		



Table 31. Oct. Collection in Canine.

Year	Average 2000 lbs.	Production 500 lbs.
1891		22,159
1892		18,186
1893		47,188
1894		70,434
1895	3,241	55,409
1901	5,548	101,427
1908	7,911	200,377
1909	9,305	153,466
1910	8,686	246,392
1911	7,651	363,172
1912	9,964	531,029
1913	10,424	404,669
1914	10,762	313,078
1915	11,576	464,954
1916	10,996	410,711
1917	13,312	402,810
1918	14,790	426,312
1919	14,352	394,387
1920	15,850	520,710
1921	16,349	422,222
1922	14,541	491,230
1923	14,588	562,996
1924	14,491	405,976
1925	12,556	402,096
1926	12,741	782,416
1927	12,240	436,712
1928	12,137	452,157
1929	12,470	262,528
1930	12,259	422,148
1931	12,671	329,572
1932	12,148	331,561



Table # 30. Barley production in Canada.

Year	Average per ac.	Production 000 bu.
1851		1,762
1860		2,491
1870		11,493
1880		16,845
1890	860	17,382
1900	872	22,324
1908	1,748	45,762
1909	1,865	57,598
1910	1,983	28,845
1911	1,522	44,418
1912	1,781	42,525
1913	1,613	42,310
1914	1,496	76,361
1915	1,713	74,717
1916	1,802	48,775
1917	2,793	85,358
1918	3,154	77,378
1919	2,646	56,382
1920	2,852	63,812
1921	2,796	59,709
1922	2,600	71,865
1923	2,785	70,298
1924	3,497	88,887
1925	3,524	67,118
1926	3,647	30,227
1927	3,306	36,256
1928	4,261	136,291
1929	3,386	102,815
1930	5,559	125,140
1931	7,782	87,788
1932	7,752	80,773





Table # 28. Egg Production in Canada.

Year	Increase 000 ea.	Production 000 bu.
1851		850
1860		1,277
1870		1,766
1880		2,597
1890		1,541
1900	177	2,317
1908	100	1,711
1909	91	1,715
1910	115	1,543
1911	171	2,492
1912	127	2,428
1913	119	2,503
1914	111	2,017
1915	132	2,496
1916	146	2,576
1917	212	2,957
1918	555	6,504
1919	753	10,207
1920	650	11,706
1921	1,842	21,456
1922	2,105	22,373
1923	1,446	22,252
1924	691	12,732
1925	643	9,159
1926	754	12,179
1927	743	14,251
1928	640	14,612
1929	992	13,160
1930	1,446	22,016
1931	771	1,532
1932	774	1,933



Table 34. Production of lead in Canada.

Year	Average ppm. ss.	Production 1000 lbs.
1881		4,488
1885		17,537
1890		9,306
1895		14,924
1900	570	17,849
1910	351	4,808
1911	395	4,605
1912	360	3,913
1913	319	3,232
1914	306	3,322
1915	196	4,464
1916	152	3,319
1917	162	3,026
1918	186	4,317
1919	275	5,456
1920	186	3,528
1921	192	2,776
1922	179	6,176
1923	162	3,898
1924	180	3,845
1925	193	3,411
1926	145	3,635
1927	151	3,721
1928	154	3,583
1929	125	1,780
1930	129	2,271
1931	83	1,562
1932	85	1,518



Table 25. Corn production in Canada.

Year	Average per ac.	Production in bushels
1851		8,170
1860		2,864
1870		7,602
1880		9,025
1890	192	10,711
1900	294	14,722
1911	322	18,722
1912	298	16,222
1913	378	16,272
1914	336	12,934
1915	332	14,362
1916	172	6,222
1917	234	7,722
1918	356	14,202
1919	352	16,222
1920	292	16,244
1921	297	14,274
1922	212	12,722
1923	212	12,722
1924	225	14,222
1925	225	16,222
1926	210	7,216
1927	122	2,222
1928	122	2,222
1929	122	2,222
1930	161	7,222
1931	122	2,222
1932	120	5,222





Table 26. Sugar and production in Canada.

Year	Average acreage.	Production 1000 bu.
1851		6,371
1860		7,648
1870		7,786
1880		4,901
1890		4,935
1900	842	4,347
1908	891	7,156
1909	842	7,808
1910	378	5,106
1911	373	5,441
1912	398	10,617
1913	381	8,872
1914	754	8,486
1915	344	7,386
1916	342	8,976
1917	306	7,149
1918	346	11,776
1919	446	10,501
1920	578	8,995
1921	861	9,880
1922	481	9,781
1923	448	9,744
1924	442	11,412
1925	474	10,546
1926	457	9,837
1927	471	10,690
1928	502	10,895
1929	516	10,470
1930	498	10,800
1931	325	6,917
1932	362	5,424



Table 27. Fishery production in Canada, 1931 (1)

	Average	Yield
Prince Edward Is.	8,500	71,000 lbs.
Nova Scotia	4,100	99,000
New Brunswick	42,100	338,000
Quebec	116,900	2,794,000
Ontario	197,000	4,511,000
Manitoba	5,700	80,000
Saskatchewan	-----	---
Alberta	-----	---
British Columbia	-----	---
Total for Canada	368,400	8,424,000

(1) Canada Yearbook.



Table 7. Wheat production, in Canada

Year	Longest year.	Production in lb.
1890	16	138
1900	23	192
1909	120	1,190
1909	128	2,215
1910	585	1,246
1911	275	16,176
1912	2,022	26,120
1913	1,852	17,539
1914	1,084	7,176
1915	442	1,114
1916	659	9,260
1917	920	5,325
1918	1,048	1,052
1919	1,023	1,472
1920	1,426	7,983
1921	582	1,112
1922	563	1,002
1923	530	7,140
1924	1,277	7,028
1925	645	1,227
1926	736	1,095
1927	276	1,030
1928	278	1,114
1929	282	1,000
1930	282	1,192
1931	627	1,165
1932	464	1,444



Table 257. Distribution of Rice Storage in Canada.

	1890	1900	1910	1920
P.R.I.	12	8	9	287
N.S.	1,648	1,018	550	520
N.B.	576	188	84	266
Que.	95,979	19,546	11,077	9,232
Ont.	72,668	161,216	22,731	104,738
Man.	951	977	2,732	125,989
Sask.	37	1,296	754	117,851
Alta.	18	1,043	6,072	104,593
B.C.	550	730	376	1,858
Total	122,102	176,673	114,733	484,708





Table # 40. Distribution of Corn acreage in Canada.

	1890	1900	1910	1920	1930
P.E.I.	74	37	28	71	
N.S.	411	177	66	70	
N.B.	501	357	63	387	
Que.	17,586	28,806	18,525	12,464	31,400
Ont.	176,395	351,641	274,540	169,595	130,000
Man.	96	62	233	588	
Sask.	50	2	94	749	
Alta.	2	23	74	570	
B.C.	80	51	19	262	
Total	192,101	360,758	293,951	204,778	161,400



Table # 41. Distribution of per acreage in Canada.

	1890	1900	1910	1920	1930	1939
U.S.I.	356	148	36	11		380
N.S.	1,184	156	109	67		300
N.E.	1,042	1,707	423	411		1,680
Que.	156,004	77,082	30,295	22,237		30,300
Ont.	763,491	586,037	321,936	79,901		90,000
Man.	626	406	363	663		1,300
Sask.	286	43	236	1,936		1,680
Alta.	107	69	251	194		1,300
B.C.	2,840	2,943	1,672	1,116		4,800
Canada	925,275	670,320	307,191	113,466		1-2,410



Table A 49. Distribution of Flax Acreage in Canada.

	1870	1900	1910	1920	1930
P.E.I.	75	28	22	28	---
N.S.	83	--	--	1	--
N.B.	72	37	5	11	--
Que.	2,873	1,381	1,382	1,773	2,200
Ont.	6,773	2,388	2,780	15,226	5,200
Man.	6,029	14,404	34,584	136,711	112,000
Sask.	83	227	502,425	916,647	431,800
Alta.	70	100	30,795	109,736	25,000
B.C.	91	1	2	217	300
Total	16,236	22,236	562,185	1,173,653	681,800





Table 243. Wheat inspection in Canada.

Year	Western	Eastern	Total
1921	231,006,300	853,610	232,469,910
1922	297,286,700	1,437,624	298,724,324
1923	269,056,988	219,399	269,731,987
1924	314,989,710	1,750,224	316,147,934
1925	352,331,240	2,179,262	354,714,596
1926	366,121,525	623,720	366,845,045
1927	397,160,580	13,200,620	410,361,110
1928	466,250,000	22,536,672	489,686,672
1929	220,000,000	9,465,538	229,465,538
1930	266,625,000	8,655,503	297,570,503
1931	259,666,000	105,000	259,771,000



Table 74. Wheat imported to Western Canada.

Year	Spring	Winter	No. bags of Winter Seed
1905			214
1906			609
1907			1,840
1908			1,004
1909			1,106
1910			1,000
1911			2,700
1912			1,000
1913			984
1914			710
1915			742
1916			166
1917			100
1918			49
1919			54
1920			79
1921	281,569,085	88,275	89
1922	297,194,800	62,800	48
1923	789,025,756	83,372	79
1924	314,386,070	21,840	10
1925	325,509,700	27,400	19
1926	335,994,820	26,600	20
1927	392,861,420	706,880	234
1928	465,792,610	686,120	230
1929	219,801,630	706,220	187
1930	286,262,434	432,596	313
1931	256,719,120	149,960	104



Table # 43. Inspections of Hard Wheat.

Year	No. of cars Inspected	Bushels	Percent of Total wheat inspected
1925	1052	3,409,000	0.1
1926	531	478,325	0.15
1927	63	83,060	0.212
1928	25	33,625	
1929	No inspections reported		

No inspections were reported for the 1924 crop.



Table A 46. Inspections of Red Turnip Root.

Year	No. of cars Inspected	Tons	Percent of Total Wheat Inspected
1924	80	65,780	0.07
1925	72	70,480	0.07
1926	181	129,025	0.07
1927	94	124,080	0.08
1928	86	113,840	0.08
1929	5	6,800	0.004
1930	3	4,100	0.001





Table # 47. Days inspected in Canada.

000 omitted

Year	Western	Eastern	Total
1921	62,412	118	62,530
1922	46,944	1,825	48,769
1923	52,987	459	53,446
1924	49,952	1,972	51,924
1925	53,694	2,865	56,559
1926	27,464	1,831	29,295
1927	38,576	1,122	39,698
1928	44,756	1,663	46,419
1929	16,965	465	17,430
1930	32,325	527	32,852
1931	41,810	566	42,376



Table 222. Survey conducted in Canada.  
 (Continued)

Year	Number	Value	Total
1921	14,000	885	14,885
1922	16,875	855	17,730
1923	19,751	115	19,866
1924	22,999	719	23,718
1925	21,971	751	22,722
1926	40,538	7,294	47,832
1927	27,335	3,767	31,102
1928	51,518	1,084	52,602
1929	28,945	35	28,980
1930	22,732	80	22,812
1931	15,264	75	15,339



Table 24. Dry Damaged in Canada  
in 1911

Year	Yentary	Expenditure	Total
1911	2,764	148	2,912
1912	12,011	97	12,108
1913	7,011	18	7,029
1914	8,163	171	8,334
1915	8,472	148	8,620
1916	7,619	8,000	15,619
1917	12,580	8,700	21,280
1918	8,627	7,700	16,327
1919	5,360	743	6,103
1920	2,780	1,200	3,980
1921	3,000	2,700	5,700





Table 25. Inspection of year in Canada

Year	Western Division	Eastern Division
1905	0	50,300
1906	0	56,924
1910	0	4,647
1914	0	12,300
1915	0	10,214
1916	0	12,644
1917	0	4,100
1918	0	11,709
1919	0	29,848
1920	0	8,000
1921	0	8,781
1922	0	15,045
1923	0	22,979
1924	0	24,708
1925	0	32,395
1926	0	10,840
1927	0	7,363
1928	0	0
1929	0	0
1930	0	0
1931	0	1,000



Table 411. Ford Injection in Canada

Year	Western Division	Eastern Division	Total
1907	0	2,510,919	2,510,919
1908	0	4,427,221	4,427,221
1909	0	272,152	272,152
1919	7,000		
1920	2,000		
1921	5,000	5,750	11,750
1922	14,600	11,251	25,851
1923	7,000	10,422	17,422
1924	2,000	16,493	18,493
1925	5,000	5,327	10,327
1926	2,500	0	2,500
1927	7,500	0	7,500
1928	0	0	0
1929	0	0	0
1930	0	0	0
1931	0	3,600	3,600



Table 2 69. Footprints Impacted by Canada.  
 1981-1983

Year	Western	Eastern	Total
1981	---	308	308
1982	12	508	520
1983	8	308	316
1984	80	1,092	1,172
1985	29	501	530
1986	35	227	262
1987	8	306	314
1988	1	526	527
1989	9	58	67
1990	4	826	830
1991	4	928	932



Table 13, Play Completed in Canada.

Continued

Year	Western	Eastern	Total
1981	2,784	---	2,784
1982	2,862	---	2,862
1983	2,768	---	2,768
1984	2,748	---	2,748
1985	2,827	---	2,827
1986	4,704	---	4,704
1987	4,116	---	4,116
1988	2,992	---	2,992
1989	1,540	---	1,540
1990	4,122	---	4,122
1991	1,912	---	1,912





Table 54. Exports of grain, 1893-1895 (1)

Barley and Oys	2,346,722 bu.
Flax	1,104 cwt.
Flaxseed	187 bu.
Corn	761,615 bu.
Oats	659,345 bu.
Peas	1,182,587 bu.
Wheat	4,579,741 bu.

(1) Seasonal Papers

Table 55. Percent of grain production irrigated 1902-03

Wheat	51.5*
Oats	11.1
Barley	29.3
Oys	61.5
Peas	0.6
Corn	0.1
Flax	61.6
PackWheat	3.2



Table # 56. Acreage of grain crops in Canada.

	Wheat	Oats	Barley	Rye
1870	1,146,781	-	-	-
1880	2,366,554	-	-	-
1890	3,701,312	3,351,221	889,434	127,403
1900	4,434,542	6,327,352	571,830	374,179
1910	3,964,514	6,610,122	1,235,284	314,798
1920	17,935,724	11,879,257	2,042,519	404,702
1930	24,956,000	13,252,700	2,205,700	1,445,250

	Corn	Pean	Soybean	Flax
1890	195,101	975,375	895,227	15,225
1900	340,763	870,750	761,736	82,381
1910	595,201	745,171	737,517	502,122
1920	204,772	115,365	355,241	1,172,022
1930	161,405	122,000	420,700	551,000



Table 2 IV. Production of Truck-crops in Canada.

	Wheat	Oats	Barley	Flax
1861	16,260,885	87,160,416	1,793,413	409,269
1865	78,719,740	48,731,744	5,701,942	1,577,000
1870	16,787,875	18,788,858	11,494,718	1,664,708
1880	72,750,869	70,478,101	38,044,840	2,047,130
1890	40,846,779	87,428,108	37,406,790	1,743,700
1900	56,578,348	161,497,187	87,004,301	2,216,707
1910	122,977,447	345,588,408	38,848,110	2,647,219
1920	301,008,411	304,988,212	42,980,749	2,815,615
1930	372,872,958	422,148,000	125,140,200	2,812,000

	Corn	Beans	Soyabean	Flax
1861	5,107,788	4,486,490	2,871,352	*
1865	2,384,000	12,896,928	2,600,000	*
1870	3,802,230	9,908,780	3,726,424	*
1880	2,035,143	(1)	4,711,147	*
1890	10,711,880	14,822,764	4,384,871	138,844
1900	25,977,312	12,742,948	4,747,158	172,300
1910	14,417,597	4,782,216	7,108,850	4,244,828
1920	10,822,278	1,552,175	4,252,484	4,890,286
1930	5,836,000	2,770,000	10,300,000	4,390,000

\* Not reported.

(1) Included with beans.





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CONFEDERATION

## 1. Province of Quebec, 1763-1793.

Flour 1763, c 4

Fish 1763, c 5

## 2. Lower Canada, 1791-1840.

Pot and Seed Apples 1791, c 2

1822, c 9 (a)

1823, c 11 (a)

1829, c 36

1832, c 15 (a)

1839, c 22 (a)

Flour and Meal 1804, c 4

1815, c 7 (a)

1823, c 1 (a)

1827, c 17 (a)

1839, c 10

1839, c 59 (a)

Beef and Pork 1804, c 9

1827, c 3 (a)

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